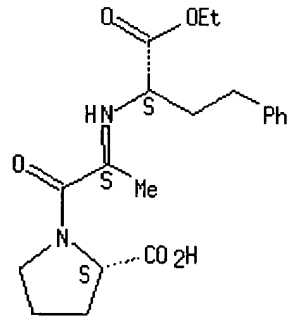
FILE 'HOME' ENTERED AT 22:25:41 ON 16 DEC 2001

=> fil reg
=> s enalapril/cn
L1 1 ENALAPRIL/CN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 75847-73-3 REGISTRY
CN L-Proline, N-[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]-L-alanyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN L-Proline, 1-[N-[1-(ethoxycarbonyl)-3-phenylpropyl]-L-alanyl]-, (S)-
OTHER NAMES:
CN **Enalapril**
FS STEREOSEARCH
DR 172964-46-4, 77549-58-7
MF C20 H28 N2 O5
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CIN, DDFU, DIOGENES, DRUGPAT, DRUGU, DRUGUPDATES, EMBASE, HSDB*, IFICDB, IFIUDB, IPA, MEDLINE, MRCK*, PHAR, PHARMASEARCH, PROMT, SYNTHLINE, TOXCENTER, TOXLIT, USAN, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: WHO

Absolute stereochemistry. Rotation (-).




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

1702 REFERENCES IN FILE CA (1967 TO DATE)
22 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1706 REFERENCES IN FILE CAPLUS (1967 TO DATE)

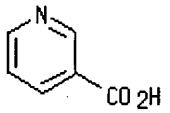
=> s niacin octyl ester
15 NIACIN
139517 OCTYL
3417972 ESTER
4645 ESTERS
3422404 ESTER
(ESTER OR ESTERS)
L2 0 NIACIN OCTYL ESTER
(NIACIN(W)OCTYL(W)ESTER)

=> s niacin/cn
L3 1 NIACIN/CN

=> d

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2001 ACS
RN 59-67-6 REGISTRY
CN 3-Pyridinecarboxylic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN  Nicotinic acid (7CI, 8CI)
OTHER NAMES:
CN  β-Pyridinecarboxylic acid
CN  3-Carboxylpyridine
CN  3-Carboxypyridine
CN  3-Pyridylcarboxylic acid
CN  Akotin
CN  Apelagrin
CN  Daskil
CN  Efacin
CN  Enduracin
CN  Linic
CN  **Niacin**
CN  Niaspan
CN  Nicacid
CN  Nicangin
CN  Nico-Span
CN  Nicodelmine
CN  Nicolar
CN  Niconacid
CN  Nicosan 3
CN  Nicotinipca
CN  Nicyl
CN  Nyclin
CN  Pellagrin
CN  Pelonin
CN  Slo-niacin
CN  SR 4390
FS  3D CONCORD
DR  123574-58-3
MF  C6 H5 N O2
CI  COM
LC  STN Files:  ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TOXLIT, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
      (*File contains numerically searchable property data)
    Other Sources:  DSL**, EINECS**, TSCA**, WHO
      (**Enter CHEMLIST File for up-to-date regulatory information)




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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           446 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          8386 REFERENCES IN FILE CAPLUS (1967 TO DATE)
             1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> s niacin butyl benzoate
          15 NIACIN
      849456 BUTYL
           9 BUTYLS
      849456 BUTYL
                (BUTYL OR BUTYLS)
      120772 BENZOATE
          12 BENZOATES
      120772 BENZOATE
                (BENZOATE OR BENZOATES)
L4         0 NIACIN BUTYL BENZOATE
                (NIACIN(W)BUTYL(W)BENZOATE)

=> s niacin and butyl and benzoate

```
          15 NIACIN
      849456 BUTYL
           9 BUTYLS
      849456 BUTYL
                (BUTYL OR BUTYLS)
      120772 BENZOATE
          12 BENZOATES
      120772 BENZOATE
                (BENZOATE OR BENZOATES)
L5         0 NIACIN AND BUTYL AND BENZOATE

=> fil medl capl biosis ipa
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                              47.39      47.60

FILE 'MEDLINE' ENTERED AT 22:30:18 ON 16 DEC 2001

FILE 'CAPLUS' ENTERED AT 22:30:18 ON 16 DEC 2001
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=> d his

     (FILE 'HOME' ENTERED AT 22:25:41 ON 16 DEC 2001)

     FILE 'REGISTRY' ENTERED AT 22:26:00 ON 16 DEC 2001
L1         1 S ENALAPRIL/CN
L2         0 S NIACIN OCTYL ESTER
L3         1 S NIACIN/CN
L4         0 S NIACIN BUTYL BENZOATE
L5         0 S NIACIN AND BUTYL AND BENZOATE

     FILE 'MEDLINE, CAPLUS, BIOSIS, IPA' ENTERED AT 22:30:18 ON 16 DEC 2001

=> s l1 and (log p or partition coeffi?)
COMMAND INTERRUPTED
If this message appears repeatedly, please notify the Help Desk.
Enter "HELP STN" for information on contacting the nearest STN Help
Desk by telephone or via SEND in the STNMAIL file.

=> s l1 (s) (log p or partition coeffi?)
L6         0 L1 (S) (LOG P OR PARTITION COEFFI?)

=> s l1 and (log p or partition coeffi?)
L7         7 L1 AND (LOG P OR PARTITION COEFFI?)

=> dup rem l7
PROCESSING COMPLETED FOR L7
L8         4 DUP REM L7 (3 DUPLICATES REMOVED)

=> d ibib abs kwic tot

L8   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER:        2000:124698  CAPLUS
DOCUMENT NUMBER:         132:273981
TITLE:                   Environmental risk assessment of human pharmaceuticals
                         in Denmark after normal therapeutic use
AUTHOR(S):               Stuer-Lauridsen, F.; Birkved, M.; Hansen, L. P.;
                         Lutzhoft, H.-C. Holten; Halling-Sorensen, B.
CORPORATE SOURCE:        COWI Consulting Engineers and Planners, Lyngby,
                         DK-2800, Den.
SOURCE:                  Chemosphere (2000), 40(7), 783-793
                         CODEN: CMSHAF; ISSN: 0045-6535
PUBLISHER:               Elsevier Science Ltd.
DOCUMENT TYPE:           Journal
LANGUAGE:                English
```

AB An environmental risk assessment is presented for the 25 most used pharmaceuticals in the primary health sector in Denmark. Predicted environmental concns. (PECs) for the aquatic environment were calcd. using conservative assumptions and all PECs exceeded 1 ng/L. Measured concns. were in general within a factor of 2-5 of PECs and ranged from ~0.5 ng/L to 3 μg/L for 9 of the pharmaceuticals reported in the literature. The calcn. of predicted no-effect concn. (PNEC) based on aquatic ecotoxicity data was possible for 6 of the pharmaceuticals. PEC/PNEC ratio exceeded 1 for ibuprofen, acetylsalicylic acid, and paracetamol. For estrogens the PEC/PNEC ratio approached one when non-std. test was used. The ratio was <1 for estrogens (std. test), diazepam, and digoxin. For the terrestrial compartment, toxicity data were not available, and no assessment was carried out. Comparisons of predicted concns. of furosemide, ibuprofen, oxytetracycline, and ciprofloxacin in sludge based on either preliminary exptl. sludge-water **partition coeffs**. (Kd), octanol-water coeffs. (Kow), or acid-base consts. (pKa) revealed large variations.

REFERENCE COUNT: 32

REFERENCE(S):
(3) Buser, H; Environ Sci Technol 1998, V32, P188 CAPLUS
(5) Christensen, F; Regul Toxicol Pharmacol 1998, V28, P212 CAPLUS
(12) Giuliani, F; Mutation Res 1996, V368, P49 CAPLUS
(19) Lanzky, P; Chemosphere 1997, V35, P2553 CAPLUS
(22) Richardson, M; J Pharm Pharmacol 1985, V37, P1 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB An environmental risk assessment is presented for the 25 most used pharmaceuticals in the primary health sector in Denmark. Predicted environmental concns. (PECs) for the aquatic environment were calcd. using conservative assumptions and all PECs exceeded 1 ng/L. Measured concns. were in general within a factor of 2-5 of PECs and ranged from ~0.5 ng/L to 3 μg/L for 9 of the pharmaceuticals reported in the literature. The calcn. of predicted no-effect concn. (PNEC) based on aquatic ecotoxicity data was possible for 6 of the pharmaceuticals. PEC/PNEC ratio exceeded 1 for ibuprofen, acetylsalicylic acid, and paracetamol. For estrogens the PEC/PNEC ratio approached one when non-std. test was used. The ratio was <1 for estrogens (std. test), diazepam, and digoxin. For the terrestrial compartment, toxicity data were not available, and no assessment was carried out. Comparisons of predicted concns. of furosemide, ibuprofen, oxytetracycline, and ciprofloxacin in sludge based on either preliminary exptl. sludge-water **partition coeffs**. (Kd), octanol-water coeffs. (Kow), or acid-base consts. (pKa) revealed large variations.

IT 50-28-2, Estradiol, biological studies 50-78-2, Acetylsalicylic acid 54-31-9, Furosemide 56-53-1 58-93-5, Hydrochlorthiazide 73-48-3, Bendroflumethiazide 103-90-2, Paracetamol 146-22-5, Nitrazepam 439-14-5, Diazepam 526-36-3 7447-40-7, Potassium chloride, biological studies 7722-84-1, Hydrogen peroxide, biological studies 15687-27-1, Ibuprofen 18559-94-9, Salbutamol 20830-75-5, Digoxin 23031-25-6, Terbutaline 43200-80-2, Zopiclone 51333-22-3, Budesonide 54024-22-5 59729-33-8, Citalopram 60282-87-3, Gestodene 65277-42-1, Ketoconazole **75847-73-3**, Enalapril 88150-42-9, Amlodipine
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (environmental risk assessment of human pharmaceuticals in Denmark after normal therapeutic use)

L8 ANSWER 2 OF 4 MEDLINE DUPLICATE 1
Full-text
ACCESSION NUMBER: 1999075490 MEDLINE
DOCUMENT NUMBER: 99075490 PubMed ID: 9860147
TITLE: Buccal absorption of enalapril and lisinopril.
AUTHOR: McElnay J C; Al-Furaih T A; Hughes C M; Scott M G; Elborn J S; Nicholls D P
CORPORATE SOURCE: Pharmacy Practice Research Group, School of Pharmacy, The Queen's University of Belfast, Northern Ireland, UK.. j.mcelnay@qub.ac.uk
SOURCE: EUROPEAN JOURNAL OF CLINICAL PHARMACOLOGY, (1998 Oct) 54 (8) 609-14.
Journal code: EN4; 1256165. ISSN: 0031-6970.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
(CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(RANDOMIZED CONTROLLED TRIAL)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 19990413
Last Updated on STN: 19990413
Entered Medline: 19990326

AB OBJECTIVE: The buccal absorption of captopril does not exhibit the classical pH/partition hypothesis, suggesting that mechanisms other than passive diffusion are involved in its absorption; animal studies have suggested that a peptide carrier-mediated transport system may be responsible for its absorption. The present study evaluated the effects of pH on octanol partitioning, and on the buccal absorption of enalapril and lisinopril, using in vitro techniques and buccal partitioning in human volunteer subjects. METHODS: The partitioning of enalapril and lisinopril into n-octanol was examined over the pH range of 3 9 at room temperature. RESULTS: Enalapril exhibited maximal partitioning into the organic phase at pH 4 5; minimal partitioning was recorded at pH values 8 and 9. The partitioning of lisinopril into n-octanol was found to be maximal at pH 9 and minimal at pH 3. Using the buccal absorption technique, the partitioning of enalapril and lisinopril (0.5 mg), was examined in six healthy male volunteers from buffered solutions (pH 3, 4, 5, 6, 7, 8 and 9). In the case of enalapril, lowest buccal partitioning occurred at pH 3, 8 and 9, while maximal partitioning occurred at pH 5; absorption of lisinopril was not extensive at any pH, but was greatest at pH 6. These results, in addition to the n-octanol **partition coefficients**, indicated that enalapril obeyed the normal lipid partition hypothesis with respect to buccal absorption. The buccal absorption of lisinopril also obeyed the lipid partition hypothesis over the pH range 3-7. These findings are in direct contrast to those for captopril. The buccal partitioning experiments were repeated at the maximal pH for absorption for each angiotensin converting enzyme (ACE) inhibitor, but with the addition of cephradine (0.05 mmol x l(-1)). CONCLUSION: The data indicated that the presence of this peptide transport inhibitor had no effect on the buccal absorption of enalapril (0.06 mmol x l(-1)) and lisinopril (0.057 mmol x l(-1)), which suggests that both drugs do not share a common buccal absorption pathway with cephradine.

AB . . . lisinopril was not extensive at any pH, but was greatest at pH 6. These results, in addition to the n-octanol **partition coefficients**, indicated that enalapril obeyed the normal lipid partition hypothesis with respect to buccal absorption. The buccal absorption of lisinopril also. . .

RN **75847-73-3 (Enalapril)**; 83915-83-7 (Lisinopril)

L8 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS DUPLICATE 2
Full-text
ACCESSION NUMBER: 1990:400162 CAPLUS
DOCUMENT NUMBER: 113:162
TITLE: Biliary excretion and conjugation of diacid angiotensin-converting enzyme inhibitors
AUTHOR(S): Drummer, Olaf H.; Nicolaci, Joe; Iakovidis, Dimitri
CORPORATE SOURCE: Clin. Pharmacol., Melbourne Univ., Heidelberg, 3205, Australia
SOURCE: J. Pharmacol. Exp. Ther. (1990), 252(3), 1202-6
CODEN: JPETAB; ISSN: 0022-3565
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The metab. and biliary excretion of the diacid angiotensin-converting enzyme inhibitors enalapril, lisinopril, perindopril and ramipril have been studied in an isolated perfused rat liver model. Inhibitors were presented to the livers at a dose of 100 μg. The hepatic clearance of lisinopril was very low (0.072 mL/min) and was hardly excreted into the bile. The clearances of enalapril, perindopril and ramipril were higher at 0.63, 0.87 and 9.9 mL/min, resp., and were excreted into bile. The amts. of ester prodrugs excreted in bile were 4.0, 6.1 and 14%, resp., whereas the diacid forms were excreted to the extent of 46, 27 and 71% of the administered dose, resp., over 4 h. Glucuronide metabolites were only detected in bile in significant concns. for perindopril and ramipril. Base hydrolysis of the perfusate samples showed that lisinopril was not metabolized to conjugates and that little metab. of enalapril occurred other than rapid conversion to the diacid form. However, both perindopril and ramipril were extensively metabolized beyond the diacid form. These differences in hepatic handling can in part be explained by their octanol-buffer **partition coeffs**. but may also be related to the introduction of a bicyclic ring in perindopril and ramipril which increases their ability to be metabolized and excreted into bile. These differences in hepatic handling of angiotensin-converting enzyme

inhibitors are likely to influence their clin. usefulness, particularly in renal and hepatic disease.

AB The metab. and biliary excretion of the diacid angiotensin-converting enzyme inhibitors enalapril, lisinopril, perindopril and ramipril have been studied in an isolated perfused rat liver model. Inhibitors were presented to the livers at a dose of 100 μg. The hepatic clearance of lisinopril was very low (0.072 mL/min) and was hardly excreted into the bile. The clearances of enalapril, perindopril and ramipril were higher at 0.63, 0.87 and 9.9 mL/min, resp., and were excreted into bile. The amts. of ester prodrugs excreted in bile were 4.0, 6.1 and 14%, resp., whereas the diacid forms were excreted to the extent of 46, 27 and 71% of the administered dose, resp., over 4 h. Glucuronide metabolites were only detected in bile in significant concns. for perindopril and ramipril. Base hydrolysis of the perfusate samples showed that lisinopril was not metabolized to conjugates and that little metab. of enalapril occurred other than rapid conversion to the diacid form. However, both perindopril and ramipril were extensively metabolized beyond the diacid form. These differences in hepatic handling can in part be explained by their octanol-buffer **partition coeffs.** but may also be related to the introduction of a bicyclic ring in perindopril and ramipril which increases their ability to be metabolized and excreted into bile. These differences in hepatic handling of angiotensin-converting enzyme inhibitors are likely to influence their clin. usefulness, particularly in renal and hepatic disease.

IT **75847-73-3**, Enalapril 76547-98-3, Lisinopril 82834-16-0, Perindopril 87333-19-5, Ramipril
RL: BIOL (Biological study)
(bile excretion and liver metab. of, structure in relation to)

L8 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1989:72130 CAPLUS
DOCUMENT NUMBER: 110:72130
TITLE: Estimating and representing hydrophobicity potential
AUTHOR(S): Fauchere, Jean Luc; Quarendon, Peter; Kaetterer, Lothar
CORPORATE SOURCE: Swiss Fed. Inst. Technol., ETH Hoenggerberg, Zurich, CH-8093, Switz.
SOURCE: J. Mol. Graphics (1988), 6(4), 203-6, 202
CODEN: JMGRDV; ISSN: 0263-7855
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The proximity effects obsd. in calcg. octanol/water **partition coeffs.** of bisubstituted aliph. chains are interpreted as a measure of the hydrophobicity potential of the substituents. These effects and the derived potentials decay exponentially from the center of the mol. fragment (substituent). A hydrophobicity potential is defined that is proportional to the hydrophobic fragmental const. and has its maximal value in the center of the fragment. Summing up the fragmental hydrophobic contributions enables assignment of a potential to any point in space around the mol. Selected colored representations of the potential, such as those for enalapril, add to the available pictures of bioactive mols. and should be useful for design purposes in mol. pharmacol.

AB The proximity effects obsd. in calcg. octanol/water **partition coeffs.** of bisubstituted aliph. chains are interpreted as a measure of the hydrophobicity potential of the substituents. These effects and the derived potentials decay exponentially from the center of the mol. fragment (substituent). A hydrophobicity potential is defined that is proportional to the hydrophobic fragmental const. and has its maximal value in the center of the fragment. Summing up the fragmental hydrophobic contributions enables assignment of a potential to any point in space around the mol. Selected colored representations of the potential, such as those for enalapril, add to the available pictures of bioactive mols. and should be useful for design purposes in mol. pharmacol.

IT **75847-73-3**, Enalapril
RL: PRP (Properties)
(hydrophobicity potential of)

=> fil reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 24.16 | 71.76 |

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -1.76      -1.76

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STRUCTURE FILE UPDATES:   14 DEC 2001  HIGHEST RN 375792-46-4
DICTIONARY FILE UPDATES:  14 DEC 2001  HIGHEST RN 375792-46-4

TSCA INFORMATION NOW CURRENT THROUGH July 7, 2001

  Please note that search-term pricing does apply when
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Crossover limits have been increased.  See HELP CROSSOVER for details.

Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> s enalaprilart/cn
L9            0 ENALAPRILART/CN

=> s enalaprilat/cn
L10           1 ENALAPRILAT/CN

=> d

L10  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2001 ACS
RN   76420-72-9  REGISTRY
CN   L-Proline, N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl- (9CI)  (CA INDEX
     NAME)
OTHER CA INDEX NAMES:
CN   L-Proline, 1-[N-(1-carboxy-3-phenylpropyl)-L-alanyl]-, (S)-
OTHER NAMES:
CN   Enalapril acid
CN   Enalapril diacid
CN   Enalaprilat
CN   Enalaprilic acid
CN   MK 421 diacid
CN   MK 422
CN   N-[1(S)-Carboxy-3-phenylpropyl]-L-alanyl-L-proline
FS   STEREOSEARCH
MF   C18 H24 N2 O5
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CAPLUS, CASREACT, CHEMLIST, CIN, DDFU, DIOGENES, DRUGPAT,
       DRUGU, EMBASE, HSDB*, IPA, MRCK*, PHAR, PROMT, SYNTHLINE, TOXCENTER,
       TOXLIT, USAN, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**, WHO
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
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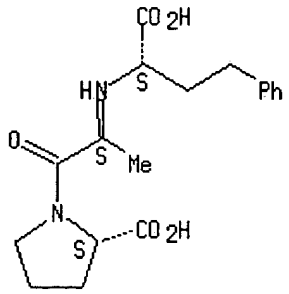


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

602 REFERENCES IN FILE CA (1967 TO DATE)
13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
605 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> fil medl capl biosis ipa

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 10.58 | 82.34 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | 0.00 | -1.76 |

FILE 'MEDLINE' ENTERED AT 22:38:45 ON 16 DEC 2001

FILE 'CAPLUS' ENTERED AT 22:38:45 ON 16 DEC 2001
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FILE 'BIOSIS' ENTERED AT 22:38:45 ON 16 DEC 2001


FILE 'IPA' ENTERED AT 22:38:45 ON 16 DEC 2001


=> s niacin (w) ester
L11 6 NIACIN (W) ESTER

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PROCESSING COMPLETED FOR L11
L12 6 DUP REM L11 (0 DUPLICATES REMOVED)

=> d ibib abs kwic tot

L12 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 2001:780687 CAPLUS
DOCUMENT NUMBER: 135:327345
TITLE: Methods and compositions useful in enhancing oxygen delivery to cells
INVENTOR(S): Jacobson, Elaine L.; Jacobson, Myron K.; Qasem, Jaber; Kim, Hyuntae; Kim, Moonsun
PATENT ASSIGNEE(S): Niadyne Corporation, USA; University of Kentucky Research Foundation
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001078730 | A1 | 20011025 | WO 2001-US12036 | 20010412 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,

IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-197277 P 20000414

AB The invention discloses compns. and methods which are useful in improving delivery of oxygen to cells. The compns. require at least one deriv. of a compd. The derivs. are chosen to have log P values below 6.0. The preferred compds. are **niacin esters**. Nicotinic acid esters were prepd. and applied topically on the skin of human volunteers. Small chain alkyl esters, those with 8 carbon atoms or less in the alkyl chain, caused vasodilation at concn. as low as 0.1%, while C9 and C10 alkyl esters caused vasodilation at 1.0% formulations. The partition coeff. of the esters showed those with log P values between 4.5-5.5 were preferred compd.

REFERENCE COUNT: 7

REFERENCE(S):
(1) Centre D'Etudes Pour L'Industrie Pharmaceutique; FR 7400 M 1969 CAPLUS
(2) Dowd, P; DERMATOLOGICA 1987, V174(5), P239 CAPLUS
(3) Krzic, M; JOURNAL OF CONTROLLED RELEASE 2001, V70(1-2), P203 CAPLUS
(4) Mainstar One Invest Pty Ltd; WO 9735597 A 1997 CAPLUS
(5) Scivoletto, R; WO 9852927 A 1998 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The invention discloses compns. and methods which are useful in improving delivery of oxygen to cells. The compns. require at least one deriv. of a compd. The derivs. are chosen to have log P values below 6.0. The preferred compds. are **niacin esters**. Nicotinic acid esters were prepd. and applied topically on the skin of human volunteers. Small chain alkyl esters, those with 8 carbon atoms or less in the alkyl chain, caused vasodilation at concn. as low as 0.1%, while C9 and C10 alkyl esters caused vasodilation at 1.0% formulations. The partition coeff. of the esters showed those with log P values between 4.5-5.5 were preferred compd.

ST topical formulation oxygen delivery **niacin ester**

L12 ANSWER 2 OF 6 IPA COPYRIGHT 2001 ASHP
Full-text

ACCESSION NUMBER: 1999:2182 IPA
DOCUMENT NUMBER: 36-03414
TITLE: Influence of physico-chemical properties of homologous nicotinic acid esters on the permeability and maximum flux through an octanol membrane
AUTHOR: Le, V. H.; Lippold, B. C.
CORPORATE SOURCE: Inst. fur Pharm. Tech. der Heinrich-Heine, Univ. Dusseldorf, D-40225 Dusseldorf, Germany
SOURCE: International Journal of Pharmaceutics (Netherlands), (Mar 18 1998) Vol. 163, pp. 11-22. 35 Refs.
CODEN: IJPHDE; ISSN: 0378-5173.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The permeability and flux of a series of model homologous niacin (nicotinic acid) esters, including methyl nicotinate, ethyl nicotinate, butyl nicotinate, hexyl nicotinate, and octyl nicotinate, were studied using a Schulman-type 3-compartment model with water as the donor and acceptor phases and octyl alcohol (octanol) as the lipophilic phase between them.

The rate constants for the transfer of the **niacin esters** from the donor phase to the acceptor phase were rather independent of the octyl alcohol/water partition coefficients of the respective esters. Also, the calculated permeabilities of the homologous esters were similar. The logarithms of the maximum fluxes of the esters in the 3-compartment model exhibited an inverse proportionality to the number of carbon atoms in the esters' alkyl chains.

Ramune T. Dailide

AB . . . acceptor phases and octyl alcohol (octanol) as the lipophilic phase between them.

The rate constants for the transfer of the **niacin esters** from the donor phase to the acceptor phase were rather independent of the octyl alcohol/water partition coefficients of the respective. . . .

IT Alcohols, octyl; permeability; **niacin esters**
IT Permeation; **niacin esters**; octyl alcohol
IT Permeability; alcohols, octyl; **niacin esters**
IT Rate constants; **niacin esters**; octyl alcohol permeation
IT Structure; **niacin esters**; octyl alcohol permeation
IT Structure-activity relationships; **niacin esters**; octyl alcohol permeation

L12 ANSWER 3 OF 6 IPA COPYRIGHT 2001 ASHP
Full-text

ACCESSION NUMBER: 95:11815 IPA
DOCUMENT NUMBER: 33-09989
TITLE: Influence of physicochemical properties of homologous esters of nicotinic acid on skin permeability and maximum flux
AUTHOR: Le, V. H.; Lippold, B. C.
CORPORATE SOURCE: Inst. fur Pharmazeutische Tech. der Heinrich-Heine Univ. Dusseldorf, D-40225 Dusseldorf, Germany
SOURCE: International Journal of Pharmaceutics (Netherlands), (Oct 3 1995) Vol. 124, pp. 285-292. 41 Refs.
CODEN: IJPHDE; ISSN: 0378-5173.
DOCUMENT TYPE: Journal
FILE SEGMENT: HUMAN
LANGUAGE: English
AB To determine the influence of physicochemical properties of homologous esters of niacin (nicotinic acid) on skin permeability, a study was conducted in 15 volunteers, ages 12-40 yr; homologous esters of niacin were applied on the arm and the permeabilities PB and maximum fluxes Jmax were calculated from the concentration decrease of the solutions after fixed periods of time.

A linear relationship was established between log PB and the octyl alcohol (octanol)/water partition coefficient (log PCOct/W). The slope of 0.32 of the plot log P/log PCOct/W was lower than the theoretical value of 1 in the case of membrane control assuming a liquid octyl alcohol membrane. No clear dependence was observed between maximum flux Jmax and the octyl alcohol solubility (csOct) of the esters. A linear relationship resulted in the plot of log Jmax + (1-0.32)logPCOct/W vs logcsOct, taking into account the relation between PB and PCOct/W.

It was concluded that the maximum flux of a drug may be predicted knowing its physicochemical properties.

M. Therese Gyi
IT Alcohols, octyl; partition coefficients; **niacin esters**
IT Water; partition coefficients; **niacin esters**
IT Permeability; skin; **niacin esters**

L12 ANSWER 4 OF 6 IPA COPYRIGHT 2001 ASHP
Full-text

ACCESSION NUMBER: 92:12449 IPA
DOCUMENT NUMBER: 30-09475
TITLE: Nicotinate esters: their binding to and hydrolysis by human serum albumin
AUTHOR: Steiner, A.; Mayer, J. M.; Testa, B.
CORPORATE SOURCE: Sch. of Pharm., Univ. of Lausanne, CH-1015 Lausanne, Switzerland
SOURCE: Journal of Pharmacy and Pharmacology (England), (Sep-Oct 1992) Vol. 44, pp. 745-749. 19 Refs.
CODEN: JPPMAB; ISSN: 0373-1022.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A total of 9 esters of niacin (nicotinic acid) were studied for their binding to, and hydrolysis by, human serum albumin.

The ethyl, isopropyl, t-butyl, cyclohexyl, and benzyl esters were bound but not hydrolyzed, while the 2-chloroethyl and 2-butoxyethyl esters of nicotinic acid displayed the opposite behavior. The 1-carbamoyethyl ester was neither bound nor readily hydrolyzed. Only the p-methoxyphenyl ester was both a ligand and a substrate, and its rate constants for binding and hydrolysis were calculated in a stepwise procedure using a kinetic model.

Anne Barton
IT Albumin human; binding; **niacin esters**, hydrolysis
IT **Niacin esters**; binding; human albumin, hydrolysis
IT Binding; **niacin esters**; human albumin, hydrolysis
IT Hydrolysis; **niacin esters**; human albumin, in vitro
IT Stability; **niacin esters**; binding, human albumin, hydrolysis

IT Structure-activity relationships; **niacin esters**; binding, human albumin, hydrolysis

L12 ANSWER 5 OF 6 IPA COPYRIGHT 2001 ASHP
Full-text

ACCESSION NUMBER: 91:6715 IPA
DOCUMENT NUMBER: 29-02363
TITLE: Structure-metabolism relationships in the hydrolysis of nicotinate esters by rat liver and brain subcellular fractions
AUTHOR: Durrer, A.; Walther, B.; Racciatti, A.; Boss, G.; Testa, B.
CORPORATE SOURCE: Sch. of Pharm., Univ. of Lausanne, CH-1015 Lausanne, Switzerland
SOURCE: Pharmaceutical Research (USA), (Jul 1991) Vol. 8, pp. 832-839. 30 Refs.
CODEN: PHREEB; ISSN: 0724-8741.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A series of esters of niacin (nicotinic acid) were synthesized and studied to determine the effects of structure on hydrolysis in rat liver and brain subcellular fractions at varying pH, organic solvents, protein concentration, duration of incubation and substrate concentration.

Esterases in each subcellular fraction displayed activities that obey Michaelis-Menten kinetics. Brain activities normalized to protein concentration, were much lower than liver activities, with aromatic compounds being the best substrates in both tissues. Qualitative and quantitative structure-metabolism relationships were not suggestive of tissue specific ester hydrolysis.

Ellen Katz Neumann

IT **Niacin esters**; synthesis; hydrolysis, rat liver, brain
IT Structure-activity relationships; **niacin esters**; hydrolysis, rat liver, brain
IT Hydrolysis; **niacin esters**; rat liver, brain
IT Solvents; effects; **niacin esters**, hydrolysis
IT Hydrogen ion concentration; **niacin esters**; hydrolysis, rat liver, brain
IT Concentration; **niacin esters**; hydrolysis, rat liver, brain
IT Metabolism; **niacin esters**; hydrolysis, structure effects, rat liver, brain

L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1971:425462 CAPLUS
DOCUMENT NUMBER: 75:25462
TITLE: Pharmaceutical auxiliary substances and drugs. XI. Determination of nicotinic acid esters in the presence of polyethylene glycol and polyethylene glycol-fatty alcohol eethers through d.c. polarography
AUTHOR(S): Lippold, B.; Ullmann, Elsa; Thoma, Karl
CORPORATE SOURCE: Inst. Pharm. Lebensmittelchem., Univ. Muenchen, Munich, Ger.
SOURCE: Pharmazie (1971), 26(1), 47-50
CODEN: PHARAT
DOCUMENT TYPE: Journal
LANGUAGE: German

AB A method is described which can be used for detn. of **niacin esters** (I) in the presence of polyethylene glycol (PEG), PEG fatty alc. ethers (II), and the cleavage products of I. There is a linear relation between the detd. redn. half wave potentials of I and the polar substituent consts. In the mixts. of I and II, a common quant. evaluable double wave appears. The lowering of the redn. wave of I signifies that the electrode reaction is hindered by the covering of the Hg surface with surfactant (II) mols. and also by the taking up of the I in the II micelles. The lowering of the wave height is much more pronounced in the presence of surfactant II than in the presence of the nonsurfactant PEG. II acts much more strongly on the polarographic behavior of the lipophilic nicotinic acid esters of benzyl and hexyl esters than on that of hydrophilic esters.
AB A method is described which can be used for detn. of **niacin esters** (I) in the presence of polyethylene glycol (PEG), PEG fatty alc. ethers (II), and the cleavage products of I. There is a linear relation between the detd. redn. half wave potentials of I and the polar substituent consts. In the mixts. of I and II, a common quant. evaluable double wave appears. The lowering of the redn. wave of I signifies that the electrode reaction is hindered by the covering of the Hg surface with surfactant (II) mols. and also by the taking up of the I in the II micelles. The lowering of the wave height is much more pronounced in the presence of surfactant II

than in the presence of the nonsurfactant PEG. II acts much more strongly on the polarographic behavior of the lipophilic nicotinic acid esters of benzyl and hexyl esters than on that of hydrophilic esters.

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L13 1 2001:780687/AN

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L13 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2001 ACS
Full-text
AN **2001:780687** CAPLUS
DN 135:327345
TI Methods and compositions useful in enhancing oxygen delivery to cells
IN Jacobson, Elaine L.; Jacobson, Myron K.; Qasem, Jaber; Kim, Hyuntae; Kim, Moonsun
PA Niadyne Corporation, USA; University of Kentucky Research Foundation
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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PRAI US 2000-197277    P    20000414
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(1) Centre D'Etudes Pour L'Industrie Pharmaceutique; FR 7400 M 1969 CAPLUS
(2) Dowd, P; DERMATOLOGICA 1987, V174(5), P239 CAPLUS
(3) Krzic, M; JOURNAL OF CONTROLLED RELEASE 2001, V70(1-2), P203 CAPLUS
(4) Mainstar One Invest Pty Ltd; WO 9735597 A 1997 CAPLUS
(5) Scivoletto, R; WO 9852927 A 1998 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT


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Calculated physical property data is now available.  See HELP PROPERTIES
for more information.  See STNote 27, Searching Properties in the CAS
Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf


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RN   369370-77-4  REGISTRY
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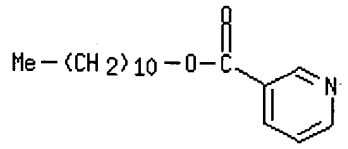

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RN   273203-62-6  REGISTRY
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OTHER NAMES:
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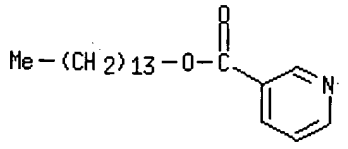

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RN   124424-97-1  REGISTRY
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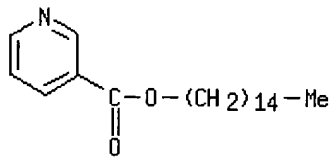

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L14 ANSWER 4 OF 18 REGISTRY COPYRIGHT 2001 ACS
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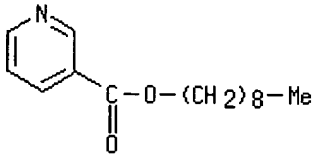

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L14 ANSWER 5 OF 18 REGISTRY COPYRIGHT 2001 ACS
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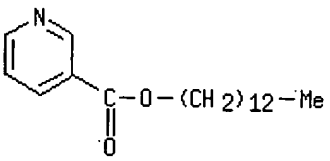

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RN **70136-02-6** REGISTRY
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OTHER CA INDEX NAMES:
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OTHER NAMES:
CN  1-Octyl nicotinate
CN  n-Octyl nicotinate
CN  Nicotinic acid n-octyl ester
CN  Octyl nicotinate
FS  3D CONCORD
MF  C14 H21 N O2
CI  COM
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    TOXLIT, USPATFULL
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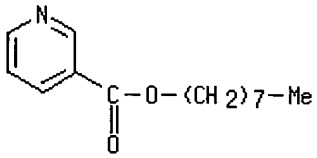

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CN  1-Hexadecyl nicotinate
CN  Cetyl nicotinate
CN  Hexadecyl nicotinate
CN  Nicotinic acid hexadecyl ester
FS  3D CONCORD
MF  C22 H37 N O2
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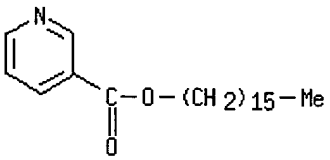

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RN  **33233-29-3**  REGISTRY
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OTHER CA INDEX NAMES:
CN  Nicotinic acid, octadecyl ester (8CI)
OTHER NAMES:
CN  1-Octadecyl nicotinate
CN  Octadecyl nicotinate
CN  Stearyl nicotinate
FS  3D CONCORD
MF  C24 H41 N O2
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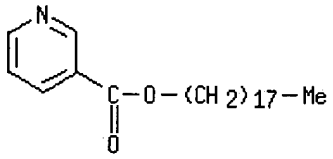

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14 REFERENCES IN FILE CA (1967 TO DATE)
14 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L14 ANSWER 9 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **23597-82-2** REGISTRY
CN 3-Pyridinecarboxylic acid, hexyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, hexyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN Hexyl 3-pyridinecarboxylate
CN Hexyl nicotinate
CN n-Hexyl nicotinate
CN Nicotherm
CN Nicotinic acid n-hexyl ester
FS 3D CONCORD
MF C12 H17 N O2
CI COM
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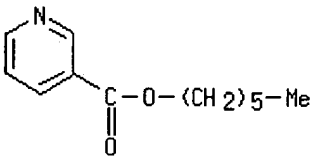
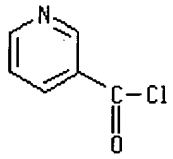


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

73 REFERENCES IN FILE CA (1967 TO DATE)
73 REFERENCES IN FILE CAPLUS (1967 TO DATE)
11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L14 ANSWER 10 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **10400-19-8** REGISTRY
CN 3-Pyridinecarbonyl chloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinoyl chloride (6CI, 7CI, 8CI)
OTHER NAMES:
CN 3-Pyridinecarboxylic acid chloride
CN 3-Pyridinylcarbonyl chloride
CN 3-Pyridoyl chloride
CN 3-Pyridylcarbonyl chloride
CN Nicotinic acid chloride
CN Nicotinyl chloride
FS 3D CONCORD
MF C6 H4 Cl N O
CI COM
LC STN Files: ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, SPECINFO, TOXCENTER, TOXLIT, USPATFULL

(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

569 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
570 REFERENCES IN FILE CAPLUS (1967 TO DATE)
6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

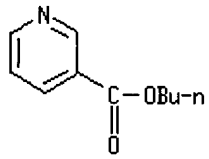
L14 ANSWER 11 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **7782-44-7** REGISTRY
CN Oxygen (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dioxygen
CN Molecular oxygen
CN Oxygen molecule
FS 3D CONCORD
DR 1338-93-8, 14797-70-7, 80217-98-7, 80937-33-3
MF O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, TRCTHERMO*, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

260566 REFERENCES IN FILE CA (1967 TO DATE)
19988 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
260818 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L14 ANSWER 12 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **6938-06-3** REGISTRY
CN 3-Pyridinecarboxylic acid, butyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, butyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN Ba 2674
CN Butyl 3-pyridinecarboxylate
CN Butyl nicotinate
CN n-Butyl nicotinate
CN Nicotinic acid n-butyl ester
FS 3D CONCORD
DR 93-93-6, 123574-73-2
MF C10 H13 N O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DETHERM*, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, RTECS*, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)

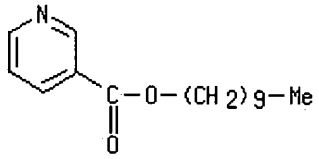
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

66 REFERENCES IN FILE CA (1967 TO DATE)
66 REFERENCES IN FILE CAPLUS (1967 TO DATE)
19 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

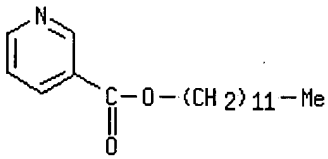
L14 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **5338-17-0** REGISTRY
CN 3-Pyridinecarboxylic acid, decyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, decyl ester (8CI)
OTHER NAMES:
CN Decyl nicotinate
FS 3D CONCORD
MF C16 H25 N O2
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

11 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES IN FILE CAPLUS (1967 TO DATE)

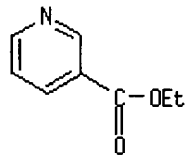
L14 ANSWER 14 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **3612-78-0** REGISTRY
CN 3-Pyridinecarboxylic acid, dodecyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, dodecyl ester (7CI, 8CI)
OTHER NAMES:
CN Dodecyl nicotinate
CN Lauryl nicotinate
FS 3D CONCORD
MF C18 H29 N O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXLIT, USPATFULL
(*File contains numerically searchable property data)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

12 REFERENCES IN FILE CA (1967 TO DATE)
12 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

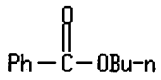
L14 ANSWER 15 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **614-18-6** REGISTRY
CN 3-Pyridinecarboxylic acid, ethyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, ethyl ester (6CI, 8CI)
OTHER NAMES:
CN β-Pyridinecarboxylic acid ethyl ester
CN 3-(Ethoxycarbonyl)pyridine
CN 3-Carbethoxypyridine
CN Ba 2673
CN Ethyl 3-pyridinecarboxylate
CN Ethyl nicotinate
CN Ignicut
CN Ignocut
CN Mucotherm
CN Nicaethan
CN Nikethan
CN Nikithan
FS 3D CONCORD
DR 123574-71-0
MF C8 H9 N O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC, PROMT, SPECINFO, SYNTHLINE, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

469 REFERENCES IN FILE CA (1967 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
470 REFERENCES IN FILE CAPLUS (1967 TO DATE)
37 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

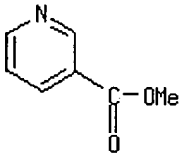
L14 ANSWER 16 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **136-60-7** REGISTRY
CN Benzoic acid, butyl ester (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Benzoic acid n-butyl ester
CN Butyl benzoate
CN Chemcryl C 101N
CN IP Carrier N 20
CN n-Butyl benzoate
FS 3D CONCORD
MF C11 H14 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DETHERM*, DIPPR*, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PROMT, RTECS*, SPECINFO, TOXCENTER, TOXLIT, TULSA, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

712 REFERENCES IN FILE CA (1967 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
712 REFERENCES IN FILE CAPLUS (1967 TO DATE)
46 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L14 ANSWER 17 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **93-60-7** REGISTRY
CN 3-Pyridinecarboxylic acid, methyl ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, methyl ester (6CI, 7CI, 8CI)
OTHER NAMES:
CN 3-(Carbomethoxy)pyridine
CN 3-(Methoxycarbonyl)pyridine
CN m-(Methoxycarbonyl)pyridine
CN Methyl 3-pyridinecarboxylate
CN Methyl nicotinate
CN Nicometh
FS 3D CONCORD
DR 123574-61-8
MF C7 H7 N O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TOXLIT, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

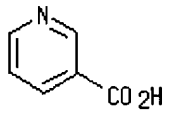


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

670 REFERENCES IN FILE CA (1967 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
670 REFERENCES IN FILE CAPLUS (1967 TO DATE)
45 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L14 ANSWER 18 OF 18 REGISTRY COPYRIGHT 2001 ACS
RN **59-67-6** REGISTRY
CN 3-Pyridinecarboxylic acid (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid (7CI, 8CI)
OTHER NAMES:
CN β-Pyridinecarboxylic acid
CN 3-Carboxylpyridine
CN 3-Carboxypyridine
CN 3-Pyridylcarboxylic acid
CN Akotin
CN Apelagrin
CN Daskil

CN Efacin
CN Enduracin
CN Linic
CN Niacin
CN Niaspan
CN Nicacid
CN Nicangin
CN Nico-Span
CN Nicodelmine
CN Nicolar
CN Niconacid
CN Nicosan 3
CN Nicotinipca
CN Nicyl
CN Nyclin
CN Pellagrin
CN Pelonin
CN Slo-niacin
CN SR 4390
FS 3D CONCORD
DR 123574-58-3
MF C6 H5 N O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TOXLIT, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

8376 REFERENCES IN FILE CA (1967 TO DATE)
446 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8386 REFERENCES IN FILE CAPLUS (1967 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> sel l14 rn 1-9, 12-15, 17
E19 THROUGH E32 ASSIGNED

=> fil medlin capl biosis uspatful ipa

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 30.20 | 138.02 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | 0.00 | -2.94 |

FILE 'MEDLINE' ENTERED AT 22:53:14 ON 16 DEC 2001

FILE 'CAPLUS' ENTERED AT 22:53:14 ON 16 DEC 2001
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE 'BIOSIS' ENTERED AT 22:53:14 ON 16 DEC 2001


FILE 'USPATFULL' ENTERED AT 22:53:14 ON 16 DEC 2001

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FILE 'IPA' ENTERED AT 22:53:14 ON 16 DEC 2001
COPYRIGHT (C) 2001 American Society of Hospital Pharmacists (ASHP)

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               /BI OR 3612-78-0/BI OR 369370-77-4/BI OR 5338-17-0/BI OR 614-18-
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               88-6/BI OR 93-60-7/BI OR 98841-58-8/BI)

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L16     142353 VASODIL?

=> s vasodil?
L17     142353 VASODIL?

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L18         19 L15 (L) L17

=> dup rem l18
PROCESSING COMPLETED FOR L18
L19         19 DUP REM L18 (0 DUPLICATES REMOVED)

=> focus
PROCESSING COMPLETED FOR L19
L20         19 FOCUS L19 1-

=> d ibib abs kwic 1-5

L20 ANSWER 1 OF 19  CAPLUS  COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER:         1985:427408  CAPLUS
DOCUMENT NUMBER:          103:27408
TITLE:                    Determination of methyl nicotinate in pharmaceutical
                          creams by high-performance thin-layer chromatography
AUTHOR(S):                De Spiegeleer, B.; Van den Bossche, W.; De Moerloose,
                          P.; Stevens, H.
CORPORATE SOURCE:         Dep. Pharm. Chem. Drug Qual. Control, State Univ.
                          Ghent, Ghent, B-9000, Belg.
SOURCE:                   Chromatographia (1985), 20(4), 249-52
                          CODEN: CHRGB7; ISSN: 0009-5893
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
GI
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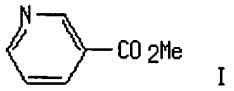



I

AB Me nicotinate (I) [**93-60-7**], a **vasodilator**, was detd. in creams by high-performance thin-layer chromatog. (HPTLC) combined with photodensitometry. The HPTLC plates were coated with silica gel 60 F 254 and the plates were developed with a mobile phase consisting of di-Et ether-CH2Cl2-hexane (5:3:2). The com. cream used contained 1% I, mephensin, cetyl alc., propylene glycol, polyethylene glycols 300 and 4000, lavender and bergamot oils. 3-Pyridinecarboxaldehyde was used as the internal std. The measurements were made in the reflectance mode at the absorption max. of I (263 nm). Calcn. of the concn. was made from a calibration graph and regression calcns. were used to det. std. deviations. The method is rapid, simple and specific. After quantitation of I, the cream excipients can be identified by using a 2nd mobile phase of MeOH-CHCl3 (3:2).

AB Me nicotinate (I) [**93-60-7**], a **vasodilator**, was detd. in creams by high-performance thin-layer chromatog. (HPTLC) combined with photodensitometry. The HPTLC plates were coated with silica gel 60 F 254 and the plates were developed with a mobile phase consisting of di-Et ether-CH2Cl2-hexane (5:3:2). The com. cream used contained 1% I, mephensin, cetyl alc., propylene glycol, polyethylene glycols 300 and 4000, lavender and bergamot oils. 3-Pyridinecarboxaldehyde was used as the internal std. The measurements were made in the reflectance mode at the absorption max. of I (263 nm). Calcn. of the concn. was made from a

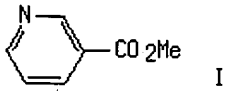
calibration graph and regression calcns. were used to det. std. deviations. The method is rapid, simple and specific. After quantitation of I, the cream excipients can be identified by using a 2nd mobile phase of MeOH-CHCl3 (3:2).

L20 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1972:509552 CAPLUS
DOCUMENT NUMBER: 77:109552
TITLE: Effect of nonglucocorticoid, local inflammation inhibitors
AUTHOR(S): Tronnier, H.
CORPORATE SOURCE: Univ.-Hautklin., Tuebingen, Ger.
SOURCE: Acta Fac. Med. Univ. Brun. (1972), No. 40(Pt. 1), 211-19
CODEN: AMUBAJ
DOCUMENT TYPE: Journal
LANGUAGE: German

AB Both **vasodilating** (e.g. hexyl nicotinate [**23597-82-2**], topically) and vasoconstricting substances (e.g. dihydroergotamine methanesulfonate [6190-39-2], perorally) provided moderate protection of human skin from uv-induced inflammation, the degree of protection being wavelength dependent. Topical salicylates, e.g. ethylene glycol monosalicylate [87-28-5], protected the skin by absorbing uv radiation, and may have some pharmacol. effect as well. Several antipyretic and analgetic drugs, e.g. phenylbutazone (I) [50-33-9] and acetylsalicylic acid [50-78-2], provided moderate protection. The results obtained varied markedly with drug dosage, route of administration, and intensity and wavelength of uv radiation, which may explain the varying results reported for these drugs in the literature.

AB Both **vasodilating** (e.g. hexyl nicotinate [**23597-82-2**], topically) and vasoconstricting substances (e.g. dihydroergotamine methanesulfonate [6190-39-2], perorally) provided moderate protection of human skin from uv-induced inflammation, the degree of protection being wavelength dependent. Topical salicylates, e.g. ethylene glycol monosalicylate [87-28-5], protected the skin by absorbing uv radiation, and may have some pharmacol. effect as well. Several antipyretic and analgetic drugs, e.g. phenylbutazone (I) [50-33-9] and acetylsalicylic acid [50-78-2], provided moderate protection. The results obtained varied markedly with drug dosage, route of administration, and intensity and wavelength of uv radiation, which may explain the varying results reported for these drugs in the literature.

L20 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1983:209777 CAPLUS
DOCUMENT NUMBER: 98:209777
TITLE: Noninvasive assessment of local nicotinate pharmacodynamics by photoplethysmography
AUTHOR(S): Tur, Ethel; Guy, Richard H.; Tur, Moshe; Maibach, Howard I.
CORPORATE SOURCE: Med. Cent., Univ. California, San Francisco, CA, USA
SOURCE: J. Invest. Dermatol. (1983), 80(5), 499-503
CODEN: JIDEAE; ISSN: 0022-202X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



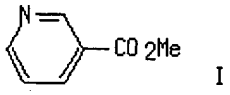
I

AB The local pharmacodynamics of a topical **vasodilator** methyl nicotinate (I) [**93-60-7**] was followed noninvasively using photopulse plethysmog. This technique is sensitive to changes in blood flow through the cutaneous microcirculation and responds to the pharmacol. stimulus of the vasoactive agent employed. Five different application sites for the drug were studied and the time course of the local effect (i.e., onset, duration, and decay) was recorded. The applied amt. of drug elicited, within a short period, a response which was saturable such that the obsd. increase in blood flow reached a plateau level. The decay of the elevated

perfusion required ~1 h, suggesting a half-life for elimination of the drug from the skin of ~10 min. This result agrees closely with other reported values and suggests that the pharmacodynamic measurements of this study may prove useful in elucidating aspects of dermal pharmacokinetics.

AB The local pharmacodynamics of a topical **vasodilator** methyl nicotinate (I) [**93-60-7**] was followed noninvasively using photopulse plethysmog. This technique is sensitive to changes in blood flow through the cutaneous microcirculation and responds to the pharmacol. stimulus of the vasoactive agent employed. Five different application sites for the drug were studied and the time course of the local effect (i.e., onset, duration, and decay) was recorded. The applied amt. of drug elicited, within a short period, a response which was saturable such that the obsd. increase in blood flow reached a plateau level. The decay of the elevated perfusion required ~1 h, suggesting a half-life for elimination of the drug from the skin of ~10 min. This result agrees closely with other reported values and suggests that the pharmacodynamic measurements of this study may prove useful in elucidating aspects of dermal pharmacokinetics.

L20 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1982:449473 CAPLUS
DOCUMENT NUMBER: 97:49473
TITLE: Rapid radial transport of methyl nicotinate in the dermis
AUTHOR(S): Guy, R. H.; Maibach, H. I.
CORPORATE SOURCE: Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SOURCE: Arch. Dermatol. Res. (1982), 273(1-2), 91-5
CODEN: ADREDL; ISSN: 0340-3696
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

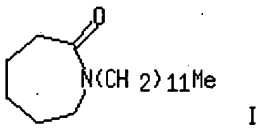
AB Topical application of a sufficiently concd. aq. soln. of methyl nicotinate (I) [**93-60-7**] elicits within minutes an erythematous, **vasodilatory** response in humans. In this study, the radial increase of the erythematous area visible in the skin was followed as a function of soln. application time and Me nicotinate concn. Because of the nature of the physiol. response, the observations are interpreted in terms of the dermal movement of the drug. The rate of radial spread was much more rapid than can be accounted for in terms of simple diffusion, and a mechanism involving transport by the blood flowing in the dermal vasculature is proposed.

AB Topical application of a sufficiently concd. aq. soln. of methyl nicotinate (I) [**93-60-7**] elicits within minutes an erythematous, **vasodilatory** response in humans. In this study, the radial increase of the erythematous area visible in the skin was followed as a function of soln. application time and Me nicotinate concn. Because of the nature of the physiol. response, the observations are interpreted in terms of the dermal movement of the drug. The rate of radial spread was much more rapid than can be accounted for in terms of simple diffusion, and a mechanism involving transport by the blood flowing in the dermal vasculature is proposed.

IT **93-60-7**
RL: BIOL (Biological study)
(transport of, within skin of human, erythema and **vasodilation** in relation to)

L20 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1986:429927 CAPLUS
DOCUMENT NUMBER: 105:29927
TITLE: Pharmacodynamic measurement of percutaneous penetration enhancement in vivo
AUTHOR(S): Ryatt, Kamaljit S.; Stevenson, John M.; Maibach,

Howard I.; Guy, Richard H.
CORPORATE SOURCE: Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SOURCE: J. Pharm. Sci. (1986), 75(4), 374-7
CODEN: JPMSAE; ISSN: 0022-3549
DOCUMENT TYPE: Journal
LANGUAGE: English
GI




I

AB Enhanced skin penetration of hexyl nicotinate [**23597-82-2**] was measured in human subjects using laser Doppler velocimetry (LDV). The local pharmacodynamic response (**vasodilatation**) to hexyl nicotinate permitted the kinetics and extent of penetration to be evaluated following topical application of 10 mM drug in a 60:40 vol./vol. propylene glycol [57-55-6]-iso-PrOH [67-63-0] vehicle. Prior to hexyl nicotinate administration, the application site was either untreated (control) or subjected to one of 4 30-min pretreatments: (a) occlusion with a polypropylene chamber; (b) occlusion (as in a) in the presence of 0.3 mL of the vehicle; (c) occlusion (as in a) in the presence of 0.3 mL of the vehicle contg. 25% 2-pyrrolidone [616-45-5]; and (d) occlusion (as in a) in the presence of 0.3 mL of the vehicle contg. 25% laurocapram (I) [59227-89-3]. The time-course and magnitude of the LDV response were characterized by the onset of action, time to peak, peak height, and area under the curve (AUC). The onset of action and time to peak were significantly shortened, and the peak height and AUC significantly increased with pretreatments a-d. For example, time to peak values were 35, 29, 22, 19, and 17 min for control and pretreatments a-d, resp. Pretreatments with vehicle, vehicle plus 2-pyrrolidone, and vehicle plus I did not cause LDV-detectable alterations in skin blood flow. The data support, therefore, a novel, simple, noninvasive, and objective demonstration of enhanced skin penetration of hexyl nicotinate in humans.

AB Enhanced skin penetration of hexyl nicotinate [**23597-82-2**] was measured in human subjects using laser Doppler velocimetry (LDV). The local pharmacodynamic response (**vasodilatation**) to hexyl nicotinate permitted the kinetics and extent of penetration to be evaluated following topical application of 10 mM drug in a 60:40 vol./vol. propylene glycol [57-55-6]-iso-PrOH [67-63-0] vehicle. Prior to hexyl nicotinate administration, the application site was either untreated (control) or subjected to one of 4 30-min pretreatments: (a) occlusion with a polypropylene chamber; (b) occlusion (as in a) in the presence of 0.3 mL of the vehicle; (c) occlusion (as in a) in the presence of 0.3 mL of the vehicle contg. 25% 2-pyrrolidone [616-45-5]; and (d) occlusion (as in a) in the presence of 0.3 mL of the vehicle contg. 25% laurocapram (I) [59227-89-3]. The time-course and magnitude of the LDV response were characterized by the onset of action, time to peak, peak height, and area under the curve (AUC). The onset of action and time to peak were significantly shortened, and the peak height and AUC significantly increased with pretreatments a-d. For example, time to peak values were 35, 29, 22, 19, and 17 min for control and pretreatments a-d, resp. Pretreatments with vehicle, vehicle plus 2-pyrrolidone, and vehicle plus I did not cause LDV-detectable alterations in skin blood flow. The data support, therefore, a novel, simple, noninvasive, and objective demonstration of enhanced skin penetration of hexyl nicotinate in humans.

=> d ibib abs kwic 6-19

L20 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1984:432778 CAPLUS
DOCUMENT NUMBER: 101:32778
TITLE: Pharmacodynamic measurements of methyl nicotinate percutaneous absorption
AUTHOR(S): Guy Richard H.; Tur, Ethel; Bugatto, Barry; Gaebel, Caroline; Sheiner, Lewis B.; Maibach, Howard I.

CORPORATE SOURCE: Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SOURCE: Pharm. Res. (1984), (2), 76-81
CODEN: PHREEB
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The local kinetics of percutaneous absorption of Me nicotinate [**93-60-7**] were measured by laser Doppler velocimetry and photopulse plethysmog. which permit pharmacodynamic measurements of skin penetration to be made in vivo in man. The methods are sensitive to the local **vasodilative** action elicited by the nicotinic acid ester. Dose-response behavior as a function of time was monitored over the concn. range 5-100 mM and by variation of drug application time and administration area. At the higher concns. used, the magnitude of the erythemal response was saturable, and the effect was then progressively prolonged by further increasing the applied dose. Anal. of the data permits assessment of the kinetics of drug delivery to and depletion from the site of action and the hypothetical level of steady state drug input necessary to sustain 50% of the max. detected response. The methods are useful elucidating otherwise inaccessible aspects of transcutaneous kinetics in vivo.
AB The local kinetics of percutaneous absorption of Me nicotinate [**93-60-7**] were measured by laser Doppler velocimetry and photopulse plethysmog. which permit pharmacodynamic measurements of skin penetration to be made in vivo in man. The methods are sensitive to the local **vasodilative** action elicited by the nicotinic acid ester. Dose-response behavior as a function of time was monitored over the concn. range 5-100 mM and by variation of drug application time and administration area. At the higher concns. used, the magnitude of the erythemal response was saturable, and the effect was then progressively prolonged by further increasing the applied dose. Anal. of the data permits assessment of the kinetics of drug delivery to and depletion from the site of action and the hypothetical level of steady state drug input necessary to sustain 50% of the max. detected response. The methods are useful elucidating otherwise inaccessible aspects of transcutaneous kinetics in vivo.

L20 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1979:562973 CAPLUS
DOCUMENT NUMBER: 91:162973
TITLE: The percutaneous absorption of methyl nicotinate from aqueous and oily creams containing inert ingredients
AUTHOR(S): Hajratwala, B. R.
CORPORATE SOURCE: Dep. Pharm., Univ. Otago, Dunedin, N. Z.
SOURCE: Proc. Univ. Otago Med. Sch. (1976), 54(1), 14-15
CODEN: PUOMA5; ISSN: 0370-2448
DOCUMENT TYPE: Journal
LANGUAGE: English
AB None of the inert ingredients, 2 or 7 wt.% starch, 5 or 10 wt.% calamine, and 5 or 10 wt.% ZnO, significantly affected the time taken for methyl nicotinate [**93-60-7**] to produce **vasodilation** when appliied in an aq. or oily cream.
AB None of the inert ingredients, 2 or 7 wt.% starch, 5 or 10 wt.% calamine, and 5 or 10 wt.% ZnO, significantly affected the time taken for methyl nicotinate [**93-60-7**] to produce **vasodilation** when appliied in an aq. or oily cream.

L20 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1979:551543 CAPLUS
DOCUMENT NUMBER: 91:151543
TITLE: Topical compositions containing vasodilators
INVENTOR(S): Champion, Julia
PATENT ASSIGNEE(S): Engl.
SOURCE: Brit. UK Pat. Appl., 4 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| GB 2002233 | A | 19790221 | GB 1978-42249 | 19780911 |

PRIORITY APPLN. INFO.: GB 1977-32303 19770802
AB A lotion, cream or ointment, or impregnated dressing contg. a

**vasodilator** was applied to an area of the body selected for localized slimming ~1 h after a high-protein low-carbohydrate meal. E.g., a lotion was prepd. contg. Me nicotinate [**93-60-7**] 1.0, ethylene glycolmonosalicylate [87-28-5] 4.0, diethylamine salicylate [4419-92-5] 0.5, capsicin 0.05, EtOH 5.0, histamine-2HCl 0.05, and propyleneglycol to 100% wt.

AB A lotion, cream or ointment, or impregnated dressing contg. a **vasodilator** was applied to an area of the body selected for localized slimming ~1 h after a high-protein low-carbohydrate meal. E.g., a lotion was prepd. contg. Me nicotinate [**93-60-7**] 1.0, ethylene glycolmonosalicylate [87-28-5] 4.0, diethylamine salicylate [4419-92-5] 0.5, capsicin 0.05, EtOH 5.0, histamine-2HCl 0.05, and propyleneglycol to 100% wt.

L20 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 2000:378291 CAPLUS
DOCUMENT NUMBER: 133:48964
TITLE: Gel with analgesic, antispasmodic, and vasodilatory action for treatment of rheumatism with sonophoresis
INVENTOR(S): Albu, Florea
PATENT ASSIGNEE(S): Rom.
SOURCE: Rom., 3 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| RO 109701 | B1 | 19960628 | RO 1992-1038 | 19920728 |

AB A title gel is disclosed which is composed of 2-50% ext. of Helleborus having a total glycoside concn. of 0.78-1.8 g% and hellebrin 0.1-0.4 g%, together with 0.09-1% Me nicotinate and hydrophilic base to 100%. The base can be 2-4% CM-cellulose gel, 0.3-0.9% Carbopol 940 gel, agarose gel, thylose gel, or modified cellulose gel. The gel is applied with sonophoresis: for chronic inflammatory rheumatism with a wattage of 0.1-0.2 W/cm2 in acute application; 0.2-0.3 W/cm2 in treatment of muscular retraction and contracture; or, for degenerative rheumatism, at a wattage of 0.3 W/cm2, with treatment duration of 5-8 min at the joint, daily for a max. period of 16 days.

IT **93-60-7**, Methyl nicotinate 9004-32-4, Thylose 9004-34-6D, Cellulose, derivs. 9012-36-6, Agarose 76050-42-5, Carbopol 940
RL: BPR (Biological process); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(gel with analgesic, antispasmodic, and **vasodilatory** action for treatment of rheumatism with sonophoresis)

L20 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1998:226762 CAPLUS
DOCUMENT NUMBER: 128:299340
TITLE: Scalp hair treatment method and composition
INVENTOR(S): Rine, Jasper M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 3 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 5738879 | A | 19980414 | US 1996-751090 | 19961115 |

AB A scalp and hair treatment compn. comprises deionized water, a vasodilator (such as Et nicotinate and/or capsicum ext.), a magnesium salt, and a hydrolyzed protein, preferably hydrolyzed keratin. The compn. can be applied on a monthly or bi-monthly basis to the scalp and hair for about 30 min and rinsed away with water.

IT 81-13-0, D-Panthenol **614-18-6**, Ethyl nicotinate 7487-88-9, Magnesium sulfate, biological studies 7779-25-1, Magnesium citrate
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)
(scalp and hair treatment compns. contg. **vasodilators** and keratin hydrolyzates and magnesium salts)

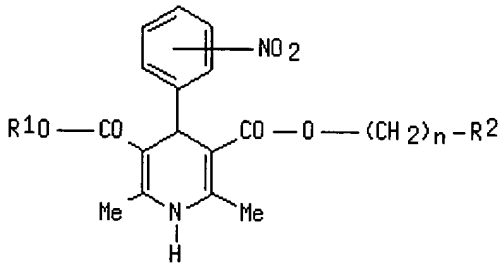
L20 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text

| | |
|---|---|
| ACCESSION NUMBER: | 1997:579710 CAPLUS |
| DOCUMENT NUMBER: | 127:220582 |
| TITLE: | Preparation of optically active 1,4-dihydropyridine derivatives as antihypertensives and vasodilators |
| INVENTOR(S): | Nakashima, Takashi; Isshiki, Kunio; Sakata, Noriaki; Agata, Naoki; Yoshioka, Takeo |
| PATENT ASSIGNEE(S): | Mercian Corp., Japan; Nakashima, Takashi; Isshiki, Kunio; Sakata, Noriaki; Agata, Naoki; Yoshioka, Takeo |
| SOURCE: | PCT Int. Appl., 37 pp.<br>CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | Japanese |
| FAMILY ACC. NUM. COUNT: | 1 |

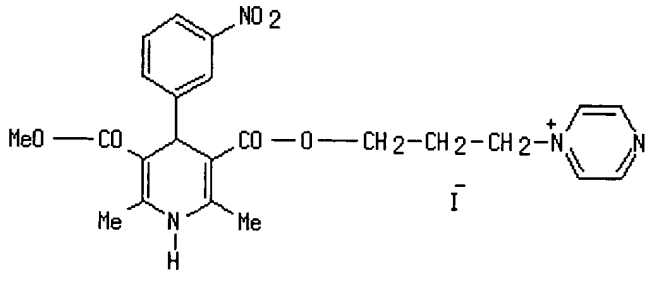
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9730987 | A1 | 19970828 | WO 1996-JP3414 | 19961121 |
| W: JP, US | | | | |
| RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| EP 916667 | A1 | 19990519 | EP 1996-938518 | 19961121 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| US 6133443 | A | 20001017 | US 1998-125608 | 19980821 |
| PRIORITY APPLN. INFO.: | | | JP 1996-60359 A | 19960223 |
| | | | WO 1996-JP3414 W | 19961121 |

OTHER SOURCE(S): MARPAT 127:220582
GI




I



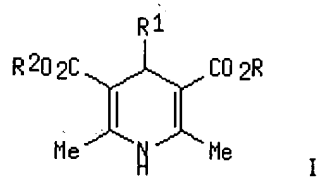

II

AB The title compds. I [R1 is alkyl; R2 is a quaternary ammonium group derived from an optionally substituted nitrogenous heterocyclic group; and n is 1, 2 or 3] are prepd. I are water-sol. antihypertensives and vasodilators. In an in vitro test (using rat artery fragment) for inhibition of KCl-induced contraction, the title compd. (S)-II showed IC50 of 2.2 pmol/L, vs. IC50 of 3 pmol/L shown by nifedipine.

IT **93-60-7**, Methyl nicotinate 98-92-0, Nicotinamide 100-54-9,

3-Cyanopyridine 110-86-1, Pyridine, reactions 288-47-1, Thiazole 289-80-5, Pyridazine 290-37-9, Pyrazine 616-47-7, 1-Methylimidazole 627-31-6, 1,3-Diiodopropane 1122-58-3 2859-67-8, 3-Pyridinepropanol 4377-33-7, 2-(Chloromethyl)pyridine 76093-33-9
RL: RCT (Reactant)
(prepn. of optically active dihydropyridine derivs. as antihypertensives and **vasodilators**)

L20 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1995:296268 CAPLUS
DOCUMENT NUMBER: 123:227956
TITLE: Mild and facile cleavage of 2-cyanoethyl ester using sodium sulfide or tetrabutylammonium fluoride. Synthesis of 1,4-dihydropyridine monocarboxylic acids and unsymmetrical 1,4-dihydropyridine dicarboxylates
AUTHOR(S): Ogawa, Toshihisa; Hatayama, Katsuo; Maeda, Hiroshi; Kita, Yasuyuki
CORPORATE SOURCE: Res. Cent., Taisho Pharm. Co., Ltd., Saitama, 330, Japan
SOURCE: Chem. Pharm. Bull. (1994), 42(8), 1579-89
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 123:227956
GI



I

AB Cyanoethyl dihydropyridinecarboxylates I [R = 2-cyanoethyl, R1 = substituted Ph, R2 = alkyl, 2-methoxyethyl, 2-(nicotinoylamino)ethyl (Q), etc.] were prepd. in moderate to good yields by means of the Hantzsch reaction. Treatment of these carboxylates with a weak base such as sodium sulfide or tetrabutylammonium fluoride at room temp. afforded smoothly the corresponding dihydropyridine monocarboxylic acids I (R = H, same R1, R2) in good yields. The monocarboxylic acids I (R = H, R1 = m-nitrophenyl, R2 = 3-nitrooxypropyl or Q) were esterified with 2-nitrooxypropanol or N-(2-hydroxyethyl)nicotinamide p-toluenesulfonic acid salt to afford the selective coronary vasodilators CD-349 and CD-832, resp.
IT **93-60-7**, Methyl nicotinate 99-61-6, m-Nitrobenzaldehyde 108-98-5, Thiophenol, reactions 141-43-5, reactions 429-41-4, Tetrabutylammonium fluoride 454-89-7, m-Trifluoromethylbenzaldehyde 674-82-8, Diketene 1313-82-2, Sodium sulfide, reactions 17392-83-5 27871-49-4 43107-08-0 65193-87-5 74936-70-2 75130-24-4 75130-25-5 75130-29-9 75130-30-2 88249-98-3 88488-47-5 88593-98-0, 3-Bromopropyl acetoacetate 100502-66-7 103434-70-4 103434-73-7 110962-94-2 121486-75-7 121486-77-9 121591-70-6 147597-21-5 147597-23-7 147597-24-8 167409-41-8 167963-61-3 167963-62-4 167963-68-0 167963-69-1
RL: RCT (Reactant)
(prepn. of coronary **vasodilating** dihydropyridinecarboxylates by cleavage of cyanoethyl esters using sodium sulfide or tetrabutylammonium fluoride)

L20 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1995:206196 CAPLUS
DOCUMENT NUMBER: 122:71549
TITLE: Antagonization by indomethacin of the vasodilating effects of nicotinates occurs on CA I
AUTHOR(S): Puscas, I.; Coltau, Marcela
CORPORATE SOURCE: Cent. Res. Med. Assist., Simleu Silvaniei, Rom.
SOURCE: Carbonic Anhydrase Modulation Physiol. Pathol.

Processes Org. [Pap. Symp.] (1994), 297-301.
Editor(s): Puscas, Ioan. Editura Helicon: Timisora, Rom.
CODEN: 60QKAI

DOCUMENT TYPE: Conference
LANGUAGE: English

AB The in vitro results show that indomethacin antagonizes the inhibitory effect of Me nicotinate on carbonic anhydrase I. In vivo, pretreatment with indomethacin antagonizes the inhibitory effect of xantinol nicotinate on carbonic anhydrase both in animals and in man. Pretreatment with xantinol nicotinate reduces the activating effect of indomethacin by over 60%. Assocd. administration of indomethacin and xantinol nicotinate induces an activation of carbonic anhydrase by 50% weaker than indomethacin-induced stimulation. Thus, the antagonism between the 2 substances takes place on the active site of carbonic anhydrase I. In ex vivo, the redn. of the inhibitory effect of Me nicotinate after indomethacin also proves the antagonism of the two drugs at the level of carbonic anhydrase I. The same antagonism is proved by the redn. of the activating effect of indomethacin both after xantinol nicotinate and after assocd. administration of the two. The redn. of the cutaneous vasodilating effect of Me nicotinate after treatment with indomethacin is another argument that proves the antagonism between nicotinate and indomethacin.

IT 53-86-1, Indomethacin **93-60-7**, Methyl nicotinate 437-74-1, Xantinol nicotinate
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(antagonism by indomethacin of **vasodilating** effects of nicotinates occurs on carbonic anhydrase I)

L20 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1995:206195 CAPLUS
DOCUMENT NUMBER: 122:46016
TITLE: Vasodilating nicotinates selectively inhibit carbonic anhydrase I (CA I) (the Nicosilvanil test for differentiation of CA I from CA II activity)
AUTHOR(S): Puscas, I.; Coltau, Marcela
CORPORATE SOURCE: Cent. Res. Med. Assist., Simleu Silvaniei, Rom.
SOURCE: Carbonic Anhydrase Modulation Physiol. Pathol. Processes Org. [Pap. Symp.] (1994), 278-81.
Editor(s): Puscas, Ioan. Editura Helicon: Timisora, Rom.
CODEN: 60QKAI

DOCUMENT TYPE: Conference
LANGUAGE: English

AB Nicotinates are selective inhibitors of CA I. Nicotinates can be used as a test for precise differentiation of CA activity and, by subtraction from the total activity, of red cell CA II activity as well, both in vitro and in vivo. The test with nicotinates termed by NICOSILVANIL allows a follow-up of the modifications of the activities of the two isoenzymes under physiol., pathol. and exptl. conditions as a response to various endogenous or therapeutic stimuli having activating or inhibitory effects.

IT **93-60-7**, Methyl nicotinate 98-92-0, Nicotinamide 437-74-1, Xantinol nicotinate
RL: BAC (Biological activity or effector, except adverse); BIOL (Biological study)
(**vasodilating** nicotinates selectively inhibit carbonic anhydrase I)

L20 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1991:676692 CAPLUS
DOCUMENT NUMBER: 115:276692
TITLE: Cutaneous responses to topical methyl nicotinate in human forearm and vulvar skin
AUTHOR(S): Elsner, Peter; Maibach, Howard I.
CORPORATE SOURCE: Sch. Med., Univ. California, San Francisco, CA, USA
SOURCE: J. Dermatol. Sci. (1991), 2(5), 341-5
CODEN: JDSCEI; ISSN: 0923-1811

DOCUMENT TYPE: Journal
LANGUAGE: English

AB To identify and define differences in percutaneous absorption and microcirculatory sensitivity between forearm and vulvar skin the authors studied the response of human forearm and vulvar (labium majus) skin to

topical Me nicotinate (MN) in healthy premenopausal women. MN-induced erythema was assessed by laser Doppler velocimetry (LDV). The following parameters were compared: (1) basal cutaneous blood flow, (2) the time to peak response, (3) the magnitude of LDV peak response, (4) the area under the LDV response-time curve, and (5) the decay time to 75% of peak response. Basal cutaneous blood flow at the vulva was higher than at the forearm; the magnitude of peak response was lower at the vulva than at the forearm; the area under the curve was lower at the vulva than at the forearm; the decay time to 75% of peak response was shorter at the vulva than at the forearm. The time to peak response showed no significant differences between sites. Apparently, the MN-induced vasodilatation is less intense and shorter in vulvar compared to forearm skin.

IT **93-60-7**, Methyl nicotinate
RL: BIOL (Biological study)
(**vasodilatation** in human forearm and vulvar skin response to, absorption in relation to)

L20 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1989:449844 CAPLUS
DOCUMENT NUMBER: 111:49844
TITLE: Cutaneous responses to topical methyl nicotinate in black, oriental, and caucasian subjects
AUTHOR(S): Gean, C. J.; Tur, E.; Maibach, H. I.; Guy, R. H.
CORPORATE SOURCE: Sch. Pharm., Univ. California, San Francisco, CA, 94143, USA
SOURCE: Arch. Dermatol. Res. (1989), 281(2), 95-8
CODEN: ADREDL; ISSN: 0340-3696
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The response of human skin to topical Me nicotinate (MN) was monitored in black, oriental, and caucasian subjects. MN-induced vasodilatation was assessed visually and by laser Doppler velocimetry (LDV). At 3 dose levels, in the 3 subject populations, 4 parameters were compared: (a) the diam. of the max. visually perceptible erythematous area (Emx); (b) the area under the erythematous diam. vs. time curve (AUE); (c) the max. LDV response (Lmx); and (d) the area under the LDV response vs. time curve (AUL). AUL (black) was greater than AUL (caucasian) for all MN concns.; AUL (oriental) was greater than AUL (caucasian) for the higher dose levels. Emx, AUE, and Lmx showed no differences between races within concns. For all subjects, Emx, AUE, and AUL were dependent on the MN dose whereas Lmx was not. Therefore, some racial differences in response to topical MN exist and perception of these distinctions may depend upon the method of measurement.

IT **93-60-7**, Methyl nicotinate
RL: BIOL (Biological study)
(skin absorption of and **vasodilation** by, in black and caucasian and oriental humans)

L20 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1987:451651 CAPLUS
DOCUMENT NUMBER: 107:51651
TITLE: Hexyl-nicotinate-induced vasodilation in normal human skin
AUTHOR(S): Dowd, Pauline M.; Whitefield, M.; Greaves, M. W.
CORPORATE SOURCE: Inst. Dermatol., St. Thomas Hosp., London, SE1, UK
SOURCE: Dermatologica (1987), 174(5), 239-43
CODEN: DERAAC; ISSN: 0011-9075
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Topical application of hexyl nicotinate to humans caused dose-related increases in red blood cell flux and erythema. However, this agent may prove useful in increasing local circulation, as increases in blood flow occurred in the presence of barely detectable erythematous responses in some individuals.

IT **23597-82-2**, Hexyl nicotinate
RL: BIOL (Biological study)
(**vasodilation** from, in human skin)

L20 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1986:454007 CAPLUS
DOCUMENT NUMBER: 105:54007
TITLE: The guinea pig ear skin as a model for the bioassay of

percutaneously applied vasoactive substances
AUTHOR(S): Matias, Jonathan R.; DeFeo, Charles Peter, III; Orentreich, Norman
CORPORATE SOURCE: Orentreich Found., Adv. Sci., Inc., New York, NY, 10021, USA
SOURCE: Ann. N. Y. Acad. Sci. (1986), 463(Colloq. Biol. Sci., 2nd, 1984), 318-20
CODEN: ANYAA9; ISSN: 0077-8923
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A method involving use of the guinea pig ear skin as a model is described for the bioassay of percutaneously applied vasoactive drugs. Blood flow is measured in the shaved mounted ear skin (central dorsal portion) by laser Doppler velocimetry. The test compd. is dissolved in Me2CO and applied topically. The suitability of the model was validated with 1% Me nicotinate [93-60-7]; for this compd., blood flow increased within 2.5 min, and the peak value was reached 4.5 min after topical application. No systemic effects of the drug (indicated by measurement of the untreated contralateral ear skin) were obsd. at the 1% concn., but a small elevation of blood flow in the contralateral ear was obsd. with Me nicotinate at concns. of 3% or greater.
IT **93-60-7**
RL: BIOL (Biological study)
(blood flow increase by, in guinea pig ear model for topical **vasodilator** screening)

L20 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1985:589452 CAPLUS
DOCUMENT NUMBER: 103:189452
TITLE: Prostaglandins and nicotinate-provoked increase in cutaneous blood flow
AUTHOR(S): Wilkin, Jonathan K.; Fortner, Glenn; Reinhardt, Linda A.; Flowers, Otero Vogt; Kilpatrick, S. James; Streeter, W. Carson
CORPORATE SOURCE: McGuire Veterans Adm. Med. Cent., Med. Coll. Virginia, Richmond, VA, 23249, USA
SOURCE: Clin. Pharmacol. Ther. (St. Louis) (1985), 38(3), 273-7
CODEN: CLPTAT; ISSN: 0009-9236
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The mechanism of topically applied Me nicotinate [93-60-7]-induced local cutaneous erythema was studied in normal human subjects. Aq. Me nicotinate (0.1-100 mmol/L) was applied to the volar forearms in quadruplicate after oral pretreatments with 25 mg doxepin HCl, 600 mg ibuprofen, 50 mg indomethacin, 975 mg aspirin, and lactose placebo. The cutaneous vascular response was monitored by laser Doppler velocimetry. Although doxepin did not affect the cutaneous vascular response to Me nicotinate, indomethacin, ibuprofen, and aspirin suppressed the response. Because indomethacin, ibuprofen, and aspirin have different chem. structures, the common property of inhibition of the response to Me nicotinate may be assigned to their common pharmacol. action, i.e., inhibition of prostaglandin bioformation.
IT **93-60-7**
RL: BIOL (Biological study)
(skin **vasodilation** stimulation by, prostaglandins mediation of, in humans)

=> s 70136-02-6
L21 25 70136-02-6

=> d ti tot

L21 ANSWER 1 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Methods and compositions useful in enhancing oxygen delivery to cells

L21 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Topical formulations for the transdermal delivery of niacin and methods of treating hyperlipidemia

L21 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Topical micronutrient delivery system using esters

L21 ANSWER 4 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI A method for enhancing protective cellular responses to genotoxic stress in skin

L21 ANSWER 5 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Chemically tagged Mitsunobu reagents for use in solution-phase chemical library synthesis

L21 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI The influence of physicochemical properties of homologous nicotinic acid esters on the permeability and maximum flux through an octanol membrane

L21 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI In-vitro permeability of the human nail and of a keratin membrane from bovine hooves: influence of the partition coefficient octanol/water and the water solubility of drugs on their permeability and maximum flux

L21 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Solvent extraction of nickel from acidic solutions using synergistic mixtures containing pyridinecarboxylate esters. Part 1. Systems based on organophosphorus acids

L21 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Influence of physicochemical properties of homologous esters of nicotinic acid on skin permeability and maximum flux

L21 ANSWER 10 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI The solvent extraction of nickel and cobalt by mixtures of carboxylic acids and pyridinecarboxylate esters

L21 ANSWER 11 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Synergistic effects in the solvent extraction of some divalent metals by mixtures of Versatic 10 acid and pyridinecarboxylate esters

L21 ANSWER 12 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Mucor miehei lipase catalyzed transesterifications on aromatic and heteroaromatic substrates. A general survey

L21 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Enzymic hydrolysis of nicotinate esters: comparison between plasma and liver catalysis

L21 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Structure-metabolism relationships in the hydrolysis of nicotinate esters by rat liver and brain subcellular fractions

L21 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Prediction of skin permeation of highly lipophilic compounds; in vitro model with a modified receptor phase

L21 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Structure-reactivity relationships in the chemical hydrolysis of prodrug esters of nicotinic acid

L21 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Structure-metabolism relationships in the enzymic hydrolysis of esters of nicotinic acid

L21 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Solvent extraction of copper(II) from chloride solutions by some pyridine carboxylate esters

L21 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Electrophoretic transdermal, pharmaceutical bases containing pyridinecarboxylic acid esters

L21 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Lipophilicity measurement of nicotinates by reversed-phase high-performance liquid chromatography. Differences in retention behavior, but similarities of log kw values, in methanol-water and acetonitrile-water eluents

L21 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Pharmaceutical transdermal gels containing poly(vinyl alcohol) and an absorption accelerator

L21 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Composition for percutaneous administration

L21 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Convenient synthesis of esters of 2-pyrrolecarboxylic acid and of pyridinecarboxylic acids by solid-liquid phase transfer catalysis without added solvent

L21 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2001 ACS
TI Aromatic alkyl esters

L21 ANSWER 25 OF 25 IPA COPYRIGHT 2001 ASHP

TI Influence of physico-chemical properties of homologous nicotinic acid esters on the permeability and maximum flux through an octanol membrane

=> d ibib abs kwic 2 3 6 7 8 9 13 14 16 17 22

L21 ANSWER 2 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 2001:780685 CAPLUS
DOCUMENT NUMBER: 135:327357
TITLE: Topical formulations for the transdermal delivery of niacin and methods of treating hyperlipidemia
INVENTOR(S): Jacobson, Myron K.; Kim, Hyuntae; Kim, Moonsun; Jacobson, Elaine L.; Qasem, Jaber
PATENT ASSIGNEE(S): Niadyne Corp., USA; University of Kentucky Research Foundation University of Kentucky
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001078727 | A1 | 20011025 | WO 2001-US12356 | 20010416 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| US 2001049382 | A1 | 20011206 | US 2001-836843 | 20010416 |

PRIORITY APPLN. INFO.: US 2000-197621 P 20000414
AB Niacin and niacin prodrugs are topically administered as suitable formulations or devices for improving the lipid profiles of subjects, preferably humans. Nicotinic acid esters were prepd. and applied topically on hairless mice. The partition coeff. of the esters showed those with log P values between 6.0-8.0 were preferred compd. for transdermal delivery of niacin to achieve tissue satn.
REFERENCE COUNT: 3
REFERENCE(S): (1) Horrobin; US 6015821 A 2000 CAPLUS
(2) Kuhrts; US 5981555 A 1999 CAPLUS
(3) Patrick; US 5496827 A 1996 CAPLUS
IT 93-60-7P 614-18-6P 3612-78-0P 5338-17-0P 6938-06-3P 23597-82-2P 33233-29-3P 66170-39-6P **70136-02-6P** 84678-88-6P 124424-97-1P 273203-62-6P
RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(topical formulations for transdermal delivery of niacin and methods of treating hyperlipidemia)

L21 ANSWER 3 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 2001:780627 CAPLUS
DOCUMENT NUMBER: 135:335143
TITLE: Topical micronutrient delivery system using esters
INVENTOR(S): Jacobson, Elaine L.; Jacobson, Myron K.; Qasem, Jaber;

Kim, Hyuntae; Kim, Moonsun
PATENT ASSIGNEE(S): Niadyne Corporation, USA; University of Kentucky
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2001078660 | A2 | 20011025 | WO 2001-US11994 | 20010412 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-197828 P 20000414

AB The invention involves methods and compns. useful in delivering micronutrients to cells. By formulating the micronutrient in the form of an ester that is convertible to the active form of the micronutrient, one can combine it with a co-ester that inhibits esterases, so that the micronutrient can reach the targeted cells prior to degrdn. Both methods and compns. are described. Thus, nicotinic acid esters were synthesized from nicotinoyl chloride combined with triethylamine (TEA), dimethylaminopyridine (DMAP), and various alkyl alcs., under nitrogen. Esters resulting from the synthesis were sepd. via silica gel column chromatog., and converted to HCl salts for further purifn., using std. methods. The purity was confirmed via TLC and 1H-NMR. Rate of hydrolysis of candidate nicotinic acid ester derivs. was detd., in aq. phosphate buffer, at physiol. pH 7.4, with incubation at 37°. Rate of pronutrient disappearance from soln. was monitored, by HPLC, at 254 nm. Nicotinic acid esters were applied topically to female hairless mice and the content of niacin and protein in tissue samples was compared to those of com. Vanicream lotion.

IT 50-81-7, Ascorbic acid, biological studies 59-30-3, Folic acid, biological studies 59-67-6, Nicotinic acid, biological studies 59-67-6D, Nicotinic acid, esters 68-19-9, Vitamin B12 79-83-4, Pantothenic acid 83-88-5, Riboflavin, biological studies 93-60-7, Methyl nicotinate 98-92-0, Nicotinamide 541-15-1, Carnitine 614-18-6, Ethyl nicotinate 1200-22-2, Lipoic acid 3612-78-0, 3-Pyridinecarboxylic acid, dodecyl ester 5338-17-0, Decyl nicotinate 6938-06-3, Butyl nicotinate 8059-24-3, Vitamin B6 23597-82-2, Hexyl nicotinate 33233-29-3, Octadecyl nicotinate 66170-39-6, 3-Pyridinecarboxylic acid, hexadecyl ester **70136-02-6**, Octyl nicotinate 84678-88-6, 3-Pyridinecarboxylic acid, tridecyl ester 124424-97-1, Pentadecyl nicotinate 273203-62-6, Tetradecyl nicotinate
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical micronutrient delivery system using esters and esterase inhibitor)

L21 ANSWER 6 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1998:203971 CAPLUS
DOCUMENT NUMBER: 128:299426
TITLE: The influence of physicochemical properties of homologous nicotinic acid esters on the permeability and maximum flux through an octanol membrane
AUTHOR(S): Le, Vinh Hiep; Lippold, Bernhard C.
CORPORATE SOURCE: Institut fur Pharmazeutische Technologie der Heinrich-Heine Universitat Dusseldorf, Dusseldorf, D-40225, Germany
SOURCE: Int. J. Pharm. (1998), 163(1-2), 11-22
CODEN: IJPHDE; ISSN: 0378-5173
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In a Schulman-type 3-compartment model with water as donor phase A and acceptor phase B and octanol as the lipophilic phase between them, rate consts. of transfer from A to B, kAB, were exptl. detd. for homologous

nicotinic acid esters (Me nicotinate, MN, Et nicotinate, EN, Bu nicotinate, BN, hexyl nicotinate, HN, and octyl nicotinate, ON). The kAB-values are rather independent of the partition coeff. octanol/water PCoct/W of the resp. esters, demonstrating diffusion control in aq. boundary layers. Thus, the calcd. permeabilities of the homologous esters for a 3-layer membrane water/octanol/water also show values of similar magnitude. The logarithms of the max. fluxes Jmax of the esters through this three layer membrane exhibit an inverse proportionality to the no. of C-atoms in the acyl chain. The slope of the resp. straight line corresponds well with the incremental const. δ for the relationship between the logarithms of the water solubilities and the alkyl chain length. This confirms the distinctive influence of aq. boundary layers on the drug transfer through octanol membranes in vitro.

IT 59-67-6D, Nicotinic acid, esters 93-60-7, Methyl nicotinate 614-18-6, Ethyl nicotinate 6938-06-3, Butyl nicotinate 23597-82-2, Hexyl nicotinate **70136-02-6**, Octyl nicotinate
RL: BPR (Biological process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(physicochem. properties effect on nicotinic acid esters on permeability and max. flux through membrane)

L21 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1997:108211 CAPLUS
DOCUMENT NUMBER: 126:207066
TITLE: In-vitro permeability of the human nail and of a keratin membrane from bovine hooves: influence of the partition coefficient octanol/water and the water solubility of drugs on their permeability and maximum flux
AUTHOR(S): Mertin, Dirk; Lippold, Bernhard C.
CORPORATE SOURCE: Dep. Pharmaceutical Technology, Heinrich-Heine-Univ., Duesseldorf, D-40225, Germany
SOURCE: J. Pharm. Pharmacol. (1997), 49(1), 30-34
CODEN: JPPMAB; ISSN: 0022-3573
PUBLISHER: Royal Pharmaceutical Society of Great Britain
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Penetration of homologous nicotinic acid esters through the human nail and a keratin membrane from bovine hooves was investigated by modified Franz diffusion cells in-vitro to study the transport mechanism. The partition coeff. octanol/water PCOct/W of the esters was over the range 7 to > 51,000. The permeability coeff. P of the nail plate as well as the hoof membrane did not increase with increasing partition coeff. or lipophilicity of the penetrating substance. This indicates that both barriers behave like hydrophilic gel membranes rather than lipophilic partition membranes as in the case of the stratum corneum. Penetration studies with the model compds. paracetamol and phenacetin showed that the max. flux was first a function of the drug soly. in water or in the swollen keratin matrix. Dissocn. hindered the diffusion of benzoic acid and pyridine through the hoof membrane. Since keratin, a protein with an isoelec. point of about 5, is also charged, this redn. can be attributed to an exclusion of the dissocg. substance due to the Donnan equil. Nevertheless, the simultaneous enhancement of the water soly. makes a distinct increase of the max. flux possible. To screen drugs for potential topical application to the nail plate, attention has to be paid mainly to the water soly. of the compd. The bovine hoof membrane may serve as an appropriate model for the nail.

IT 62-44-2, Phenacetin 65-85-0, Benzoic acid, biological studies 93-60-7, Methyl nicotinate 100-51-6, Benzyl alcohol, biological studies 103-90-2, Paracetamol 110-86-1, Pyridine, biological studies 614-18-6, Ethyl nicotinate 6938-06-3, Butyl nicotinate 23597-82-2, Hexyl nicotinate **70136-02-6**, Octyl nicotinate
RL: BPR (Biological process); PRP (Properties); BIOL (Biological study); PROC (Process)
(in-vitro permeability of human nail and of a keratin membrane from bovine hooves and influence of partition coeff. octanol/water and water soly. of drugs on permeability and max. flux)

L21 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text

ACCESSION NUMBER: 1996:293383 CAPLUS
DOCUMENT NUMBER: 124:348511
TITLE: Solvent extraction of nickel from acidic solutions using synergistic mixtures containing

pyridinecarboxylate esters. Part 1. Systems based on organophosphorus acids
AUTHOR(S): Preston, John S.; du Preez, Anna C.
CORPORATE SOURCE: Mineralogy and Process Chem. Division, Randburg, 2125, S. Afr.
SOURCE: J. Chem. Technol. Biotechnol. (1996), 66(1), 86-94
CODEN: JCTBED; ISSN: 0268-2575
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The solvent extn. of nickel from acidic solns. by pyridinecarboxylate esters (2-, 3- and 4-C5H4N.CO.OR) mixed with organophosphorus acids (R2POOH, (RO)RPOOH and (RO)2POOH) in toluene was investigated for both series of compds. in which R = n-octyl, 2-ethylhexyl and cyclooctyl. Substantial synergistic effects were obsd., which increased in the orders: pyridine 2-ester < 3-ester < 4-ester, and: phosphinic < phosphonic < phosphoric acid. The extractability of divalent base metals from sulfate solns. by mixts. of isodecyl 4-pyridinecarboxylate and di(2-ethylhexyl) phosphoric acid in Shellsol K decreases through the series Cu > Ni > Zn > Co > Ca > Mg. In a batch countercurrent expt., a simulated leach liq. contg. Ni 2.1, Cu 0.5, Ca 0.4 and Mg 5.0 g dm-3 (initial pH 3.00) was extd. with the mixed reagent (0.50 M) in four stages at unit phase ratio, without pH adjustment. Recoveries of nickel and copper were 93 and 100%, with co-extns. of calcium and magnesium of 10 and 1%, resp. In a similar expt. using isodecyl 3-pyridinecarboxylate in place of the 4-isomer, the overall extns. were nickel 80, copper 100, calcium 17 and magnesium 3%.
IT 298-07-7, D2EHPA 5335-69-3 6303-21-5, Phosphinic acid 13598-36-2, Phosphonic acid 40975-41-5 **70136-02-6** 77074-34-1
101776-31-2 103829-39-6 163777-99-9 163778-01-6 163778-03-8
RL: NUU (Other use, unclassified); USES (Uses)
(solvent extn. of metals from acidic solns. using synergistic mixts. contg. pyridinecarboxylate esters. and organophosphoric acids)

L21 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1995:778317 CAPLUS
DOCUMENT NUMBER: 123:208636
TITLE: Influence of physicochemical properties of homologous esters of nicotinic acid on skin permeability and maximum flux
AUTHOR(S): Le, Vinh Hiep; Lippold, Bernhard C.
CORPORATE SOURCE: Institut fuer Pharmazeutische Technologie der Heinrich-Heine Universitaet Duesseldorf, Dusseldorf, D-40225, Germany
SOURCE: Int. J. Pharm. (1995), 124(2), 285-92
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The uptake of homologous esters of nicotinic acid by the skin was investigated with glass chambers on 15 healthy volunteers. The permeabilities PB and max. fluxes Jmax were calcd. from the concn. decrease of the aq. solns. after fixed periods of time. A linear relation was established between log PB and log PCOct/W, the octanol/water partition coeff. The slope of 0.32 of the plot log P/log PCOct/W was lower than the theor. value of 1 in the case of membrane control assuming a liq. octanol membrane. This large deviation is a consequence of a distinct difference between the lipophilicity of the lipid regions of the stratum corneum and octanol. Therefore, no clear dependence was obsd. between the max. flux Jmax and the octanol soly. csOct of the esters. However, a linear relation resulted in the plot of log Jmax+(1-0.32) log PCOct/W vs log csOct, taking into account the relation between PB and PCOct/W. Thus, the max. flux of a drug may be predicted knowing its physicochem. properties.
IT 59-67-6D, Nicotinic acid, ester 93-60-7, Methyl nicotinate 23597-82-2, Hexyl nicotinate **70136-02-6**, Octyl nicotinate
RL: BPR (Biological process); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(physicochem. properties effect on nicotinates skin permeability in humans)

L21 ANSWER 13 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1992:247829 CAPLUS
DOCUMENT NUMBER: 116:247829
TITLE: Enzymic hydrolysis of nicotinate esters: comparison between plasma and liver catalysis

AUTHOR(S): Durrer, A.; Wernly-Chung, G. N.; Boss, G.; Testa, B.
CORPORATE SOURCE: Sch. Pharm., Univ. Lausanne, Lausanne, CH-1015, Switz.
SOURCE: Xenobiotica (1992), 22(3), 273-82
CODEN: XENOBH; ISSN: 0049-8254
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The enzymic hydrolysis of a wide series of nicotinic acid esters was investigated using human and rat plasma, and purified hog liver carboxylesterase, and compared with previously published data from rat liver microsomes. Esterase activities were always found to obey Michaelis-Menten kinetics. Rat liver microsomal and plasma enzyme velocities were 6 orders of magnitude smaller than those of purified hog liver carboxylesterase, and 3 orders smaller than human plasma activities, but the Km values were of the same magnitude. The binding of nicotinate esters to human plasma esterases, and purified hog liver carboxylesterase, appears to depend mainly on hydrophobic and steric factors.

IT 70-19-9, Tetrahydrofurfuryl nicotinate 93-60-7, Methylnicotinate 94-44-0, Benzyl nicotinate 553-60-6, Isopropyl nicotinate 614-18-6, Ethyl nicotinate 1322-29-8, Butoxyethyl nicotinate 3468-48-2, p-Chlorophenyl nicotinate 3468-53-9, Phenyl nicotinate 3612-80-4, 2-Hydroxyethyl nicotinate 6938-06-3, n-Butyl nicotinate 7681-15-4, n-Propyl nicotinate 19416-51-4 21937-63-3 23597-82-2, n-Hexyl nicotinate 24446-42-2 24690-42-4, p-Nitrophenyl nicotinate 31678-58-7, Iso-butyl nicotinate 65321-36-0, tert-Butyl nicotinate 65321-38-2, Cyclohexyl nicotinate **70136-02-6**, n-Octyl nicotinate 83427-76-3, 2-Chloroethyl nicotinate 101952-65-2, 3-Hydroxypropyl nicotinate 108332-44-1, Carbamoylmethyl nicotinate 108332-46-3 120004-88-8 141606-50-0
RL: RCT (Reactant)
(hydrolysis of, in blood plasma vs. liver)

L21 ANSWER 14 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1991:484788 CAPLUS
DOCUMENT NUMBER: 115:84788
TITLE: Structure-metabolism relationships in the hydrolysis of nicotinate esters by rat liver and brain subcellular fractions
AUTHOR(S): Durrer, Anne; Walther, Bernard; Racciatti, Antonio; Boss, Gilles; Testa, Bernard
CORPORATE SOURCE: Sch. Pharm., Univ. Lausanne, Lausanne, CH-1015, Switz.
SOURCE: Pharm. Res. (1991), 8(7), 832-9
CODEN: PHREEB; ISSN: 0724-8741
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rat liver and brain subcellular esterase activities toward nicotinic acid esters were studied, under varying conditions, such as pH, org. solvents, protein concn., duration of incubation, and substrate concn. Esterases in each subcellular fraction displayed activities that obey Michaelis-Menten kinetics, although subcellular fractions are heterogeneous. The Km values were of the same magnitude, and the Vmax values were lower in microsomes than in cytosol of the liver. Brain activities normalized to protein concn., were much lower than liver activities, arom. nicotinates being the best substrates in both tissues. Myelin and brain mitochondria of nerve-ending and neuroglial origin display esterase activity toward Ph nicotinate. In contrast to brain esterases, liver esterases appear homogeneous, and esterase activities in both tissues react differently to changes in pH. Qual. and quant. structure-metab. relationships are not suggestive of tissue-specific ester hydrolysis.

IT 59-67-6D, Nicotinic acid, esters 70-19-9 93-60-7 94-44-0 553-60-6 614-18-6 3468-53-9 6938-06-3 19416-51-4 23597-82-2 24690-42-4 65321-36-0 65321-38-2 **70136-02-6** 101952-65-2 108332-46-3 131222-85-0
RL: RCT (Reactant)
(hydrolysis of, by esterases of brain vs. liver, structure in relation to)

L21 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1991:30015 CAPLUS
DOCUMENT NUMBER: 114:30015
TITLE: Structure-reactivity relationships in the chemical hydrolysis of prodrug esters of nicotinic acid
AUTHOR(S): Wernly-Chung, Gia Nghi; Mayer, Joachim M.; Tsantili-Kakoulidou, Anna; Testa, Bernard

CORPORATE SOURCE: Sch. Pharm., Univ. Lausanne, Lausanne, CH-1005, Switz.
SOURCE: Int. J. Pharm. (1990), 63(2), 129-34
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The rate of chem. hydrolysis of 25 esters of nicotinic acid was measured at pH 7.4 and 37°. The most stable esters, which are also the least water-sol. ones, do not undergo any detectable hydrolysis over a period of 5 wk. In contrast, the most labile esters display half-lives of <3h, but the half-life of most compds. falls in the range 100-1000 h. The rate consts. of hydrolysis (as log k values) correlate pos. with Taft's polar substituent parameter, as well as with the chem. shift of the carbonyl carbon, in compatibility with a mechanism of general base catalysis demonstrated by the pH profile of the reaction.

IT 70-19-9, Tetrahydrofurfuryl nicotinate 93-60-7, Methyl nicotinate 94-44-0, Benzyl nicotinate 553-60-6, Isopropyl nicotinate 614-18-6, Ethyl nicotinate 3468-48-2, p-Chlorophenyl nicotinate 3612-80-4, 2-Hydroxyethyl nicotinate 6938-06-3, n-Butyl nicotinate 7681-15-4, n-Propyl nicotinate 13912-80-6, 2-Butoxyethyl nicotinate 19416-51-4, 2-Methoxyethyl nicotinate 21937-63-3 23597-82-2, n-Hexyl nicotinate 24446-42-2 24690-42-4, p-Nitrophenyl nicotinate 31678-58-7, Isobutyl nicotinate 65321-36-0, tert-Butyl nicotinate 65321-38-2, Cyclohexyl nicotinate **70136-02-6**, n-Octyl nicotinate 83427-76-3, 2-Chloroethyl nicotinate 101952-65-2, 3-Hydroxypropyl nicotinate 108332-44-1, Carbamoylmethyl nicotinate 108332-46-3 120004-88-8 131222-85-0
RL: BIOL (Biological study)
(prodrug, hydrolysis of, structure effect on)

L21 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1989:165539 CAPLUS
DOCUMENT NUMBER: 110:165539
TITLE: Structure-metabolism relationships in the enzymic hydrolysis of esters of nicotinic acid
AUTHOR(S): Chung, J.; Mayer, J. M.; El Tayar, N.; Van de Waterbeemd, H.; Testa, B.
CORPORATE SOURCE: Sch. Pharm., Univ. Lausanne, Lausanne, CH-1005, Switz.
SOURCE: Proc. - Eur. Congr. Biopharm. Pharmacokinet., 3rd (1987), Volume 2, 523-9. Editor(s): Aiache, J. M.; Hirtz, J. Impr. Univ. Clermont-Ferrand: Clermont-Ferrand, Fr.
CODEN: 56LDAZ
DOCUMENT TYPE: Conference
LANGUAGE: English

AB A no. of nicotinate esters were prepd. Chem. hydrolysis was studied under physiol. conditions and enzymic hydrolysis was investigated by using purified pig liver carboxyl esterase. Quant. structure-metab. relationship anal. demonstrated that lipophilicity and steric features were the most important factors influencing the enzymic reaction.

IT 59-67-6D, Nicotinic acid, esters 70-19-9, Nicotinic acid tetrahydrofurfuryl ester 93-60-7, Methyl nicotinate 94-44-0, Nicotinic acid benzyl ester 553-60-6, Isopropyl nicotinate 614-18-6, Ethyl nicotinate 1322-29-8, Nicotinic acid butoxyethyl ester 1452-94-4, Nicotinic acid 2-chloroethyl ester 3468-48-2, Nicotinic acid p-chlorophenyl ester 3612-80-4, Nicotinic acid 2-hydroxyethyl ester 6938-06-3, Nicotinic acid n-butyl ester 7681-15-4, n-Propyl nicotinate 19416-51-4 21937-63-3 23597-82-2, Nicotinic acid n-hexyl ester 24446-42-2, Nicotinic acid 3,3,5-trimethylcyclohexyl ester 24690-42-4, Nicotinic acid p-nitrophenyl ester 31678-58-7, Nicotinic acid isobutyl ester 65321-36-0, Nicotinic acid tert-butyl ester 65321-38-2, Nicotinic acid cyclohexyl ester **70136-02-6**, Nicotinic acid n-octyl ester 101952-65-2 108332-44-1 108332-45-2 108332-46-3, Nicotinic acid phenoxyethyl ester 120004-88-8, Nicotinic acid 3-aminopropyl ester
RL: RCT (Reactant)
(enzymic hydrolysis of, structure in relation to)

L21 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2001 ACS
Full-text
ACCESSION NUMBER: 1986:485216 CAPLUS
DOCUMENT NUMBER: 105:85216
TITLE: Composition for percutaneous administration
INVENTOR(S): Abe, Yoko; Satoh, Susumu; Hori, Mitsuhiko; Yamanaka, Naoko

PATENT ASSIGNEE(S): Nitto Electric Industrial Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 40 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 182635 | A1 | 19860528 | EP 1985-308359 | 19851115 |
| EP 182635 | B1 | 19890531 | | |
| R: CH, DE, FR, GB, LI, NL | | | | |
| JP 61122225 | A2 | 19860610 | JP 1984-241456 | 19841115 |
| JP 05070611 | B4 | 19931005 | | |
| JP 61218530 | A2 | 19860929 | JP 1985-61687 | 19850325 |
| JP 04079328 | B4 | 19921215 | | |
| US 4847260 | A | 19890711 | US 1987-113352 | 19871026 |

PRIORITY APPLN. INFO.: JP 1984-241456 19841115
JP 1985-61687 19850325
US 1985-798515 19851115

AB Nicotinic esters or isonicotinic esters are effective in enhancing percutaneous permeability and absorbability of drugs and these effects can further be insured by combined use of the esters with polar compds. such as alcs., glycerin, thioglycerol, lactic acid, etc. Thus, n-dodecyl nicotinate (I) was prepd. by esterification of nicotinic acid with lauryl bromide. A compn. was formulated contg. propranolol-HCl (active ingredient, II) 1, N-methylpyrrolidone (polar compd.) 74, and I 25%. Percutaneous permeability of II was tested in vitro. The permeability of II in the above compn. was 12.9 times higher than the control compn. contg. II 1 and DMSO 99%, and 2.3 times higher than the comparative compn. contg. II 1 and N-methylpyrrolidone 99%.

IT 3612-78-0 5338-17-0 40975-41-5 **70136-02-6** 71653-48-0
78053-96-0 78695-24-6 81660-79-9 81672-33-5 85098-91-5
92197-21-2 93145-74-5 100618-60-8 101776-31-2 103225-02-1
103829-37-4 103829-38-5 103829-39-6 103829-40-9 103829-41-0
RL: BIOL (Biological study)
(percutaneous drug formulation contg., as penetration enhancer)

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 132.67 | 270.69 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -17.64 | -20.58 |

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